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ABSTRACT

This report presents a plan for improving the education of minority students in the United States. Section 1 is an introduction. Section 2 presents the goals for improvement of minority education by the year 2000. Section 3 discusses why the United States needs an educational system that works for all students. Section 4 discusses the minority experience in American education. Section 5, "A Closer Look," presents profiles of each of the following minority groups: (1) Alaska Natives; (2) American Indians; (3) Black Americans; (4) Mexican Americans; and (5) Puerto Ricans. Section 6, "Why We Are Behind," discusses the myths about educating minority students, and other obstacles to a quality education. Section 7 discusses restructuring American schools to achieve quality education for all students. Section 8, "The Action Plan," covers the following aspects of the plan: (1) guidelines; (2) vision; and (3) recommended strategies for achieving quality education for minorities. Section 9 discusses the roles of family and community, and public and private responsibilities for improving the education of minority students. Section 10 discusses how to meet this challenge. Section 11 presents a proposal for a first step toward improving education. Section 12 discusses the estimated costs of achieving the goals stipulated in the plan. Section 13 presents a list of 60 related readings. Eight tables and four figures are included. The following information is appended: (1) charts of action plan roles and responsibilities; (2) definitions of ethnic group labels; (3) lists of project participants; and (4) a list of commissioned papers. (JS)

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EDUCATION THAT WORKS:

AN ACTION PLAN FOR THE EDUCATION OF MINORITIES

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QUALITY EDUCATION
FOR MINORITIES PROJECT

JANUARY, 1990

UD 027 319

EDUCATION THAT WORKS:
AN ACTION PLAN FOR THE EDUCATION OF MINORITIES

QUALITY EDUCATION
FOR MINORITIES PROJECT

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS

JANUARY, 1990

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A NEW VOICE, A NEW ROLE

The Action Council on Minority Education which issued this Plan includes minority and nonminority educators, union officials, business leaders, and policymakers. We choose to speak with a minority voice throughout most of this Plan to emphasize the vital importance of reflecting a minority perspective in the national debate on educational change. For too long, minorities have borne the brunt of the nation's educational failures, with little or no say over how our children are educated. With this Plan, we as Americans seek to assume a leading role in the national effort to create a new kind of learning system that recognizes the value and potential of all children.

OUR FOCUS

Our Plan focuses on the educational needs and interests of Alaska Native, American Indian, Black American, Mexican American, and Puerto Rican peoples in the United States. We have sought to make reasonable choices about the labels used in discussing these five groups, recognizing that names are important and that no single name is uniformly used by a community. We also know that names change over time and across regions and contexts. To make the document easier to read and to conform with the way most data are collected, we generally use the names above, along with the more generic term "minority" to refer to our five groups. For further explanation, see Appendix B.

We recognize that the educational concerns facing this nation cross all racial and ethnic bounds, and that many Asian Americans, Native Hawaiians, other Hispanics, recent immigrants, and low-income Whites have not been served well by our educational system. We focus on the five groups above because, historically, they have been undereducated in America. However, the educational system we envision will benefit all Americans.

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The Quality Education for Minorities (QEM) Project's Action Council on Minority Education was led by Ray Marshall, Rapoport Centennial Professor of Economics and Public Affairs at the University of Texas at Austin. The Council is a forum of prominent minority and nonminority educators and policymakers which provided broad guidance and direction to the QEM Project and issued this Plan. Shirley McBay, Dean for Student Affairs at the Massachusetts Institute of Technology, served as chair of the QEM Project's Resource Group and as the QEM Project Director. The Resource Group helped organize this effort, participated in regional meetings, and assisted in the development of the Action Plan.

To prepare this document, the QEM Project undertook a comprehensive examination of the educational status, needs, and possibilities of minority children, youth, and adults. That effort would have been impossible without the support and advice of hundreds of minority and nonminority educators, policymakers, community leaders, parents, and students who participated along the way. The QEM Project convened 9 hearings throughout the country, at which more than 300 people (listed in Appendix C) gave us the benefit of their expertise and experience; held 5 discussion group meetings, involving 60 experts and scholars, on major educational issues; and convened on four occasions the "January 15th" Group, a forum of prominent minority leaders, analysts, and advocates in Washington D.C. In addition, the project commissioned four papers analyzing significant issues; created a data base of promising programs and practices ; and convened working groups of students at both MIT and the University of Texas at Austin to analyze data, identify trends, flesh out ideas under study, and suggest new possibilities.

A national project such as this would not have been possible without the support and assistance of many individuals, organizations, and institutions. We are especially grateful to David Hamburg, Alden Dunham, and Bernard Charles of the Carnegie Corporation of New York, whose vision and leadership were crucial to our mission. In particular, Bernard Charles provided a constant source of guidance and challenge in addressing the educational issues facing minority Americans.

Our special thanks are also extended to the numerous individuals who unselfishly contributed to the project at MIT and at the University of Texas at Austin. We list them in Appendix C.

INTRODUCTION

We, the Alaska Native, American Indian, Black American, Mexican American, and Puerto Rican peoples living in the United States are 48 million strong: 20 percent of the nation. In many ways, we are as different from one another as we are from the nonminority population in America, but we all share a common and threatened destiny in our children.

Like all other Americans, the gateway to a better life for us has always been education. Our faith in its power remains strong despite the many obstacles that have barred us from the doors of educational opportunity. For us, the right to a quality education is as fundamental as citizenship, tribal sovereignty, the right to vote, the freedom to use public facilities, or the freedom to worship as we choose. For us, education is freedom's foundation, and the struggle for a quality education is at the heart of our quest for liberty.

The outcome of that struggle, however, remains in doubt. Forty-four years after *Méndez v. Westminster School District,* forty-one years after *Delgado v. Bastrop Independent School District,* and thirty-five years after *Brown v. The Board of Education of Topeka*—all cases that declared segregated schools unconstitutional—most minority children remain in schools that are separate and decidedly unequal. Educational opportunities for most minority youth lag behind those available to White students, and that lack of opportunity is reflected in the lower educational achievement of minority children.

Yet we have accomplished much over that period. While school dropout rates for minority youngsters are still too high, dropout rates were twice as high for Black youth two decades ago and 20 percent higher for Hispanic youth 15 years ago. While too few minority students today have the opportunity to go to college, nearly 90,000 Alaska Native, American Indian, Black, and Hispanic youth did earn baccalaureate degrees in 1987. While far too few minority youth are now realizing their potential in science and engineering careers, 17,000 of the baccalaureates earned in 1987 by minority students were in the physical and life sciences and engineering, and minority graduates are now serving as astronauts, scientists, and entrepreneurs to a degree that would have astonished previous generations.

What we have accomplished to this point is only a preview of the educational success that we can and must achieve. What we have learned to this point about how to gain these accomplishments can have even greater impact on the future. We do not have all the answers uniformly in place, for despite the best efforts of educators, policymakers, and communities, many minority students are still denied access to quality education. We do know, however, how to create a school that helps even the most alienated child feel part of a family of learners: Rich's Academy in Atlanta, for example, can do that. We do know how to instill a dream of a career in science in a young girl from rural Puerto Rico: Project CAUSA can do that. We do know how to help minority college freshmen outperform their nonminority peers in calculus: U.C. Berkeley's Mathematics Workshop can do that. We know many programs that work, that take children who are poor and have been the victims of low expectations and few opportunities, and help them realize their academic potential. And more, we know what general strategies work that could help change the system itself to bring about educational excellence for all of America's youth.

In this Plan, we present examples of education that works, and lay out a series of strategies for institutionalizing these successful approaches. The point is that we know what the problems are and what to do about them. What is lacking is the leadership, the commitment, the resources, and the wisdom to move forward.

It is important to be clear that minority Americans do not seek the same level of educational opportunity now enjoyed by most White children: we seek much more, and for all students. Quality education is still not available to most minority students; nor is it uniformly available to all nonminority students. The strategies and recommendations contained in this Plan will help all children, for the learning system we envision could not provide opportunities for one at the expense of another. Our present system of learning—a mass education for mass production model—is clearly inadequate if the nation is to meet the challenges facing us in the 21st century. But for minority students, our educational system is not merely inadequate: it is, all too often, openly hostile and damaging.

Thus, while it is minority children who are disproportionately receiving failing grades in school, it is the educational system which has failed. The financing, organization, and management of our schools are major factors explaining why America does not provide a quality education for all. If we are to achieve higher levels of performance and educational equity, the nation must make fundamental and systemic changes in its educational enterprises.

Until now, the leadership in the educational hierarchy and in educational reform efforts has remained primarily White. Minorities are not well represented among governors, commissioners of education, school boards, teachers, and others involved in making and implementing major educational policy decisions. Even when minorities serve in leadership positions as mayors, superintendents, or principals, they are frequently constrained by the way schools are financed and governed. Minority Americans need to be part of the decision-making process on changes needed to bring a quality education to our youth.

In 1987, the Carnegie Corporation of New York funded the Quality Education for Minorities (QEM) Project to provide a comprehensive voice for Alaska Natives, American Indians, Black Americans, Mexican Americans, and Puerto Ricans in the education policy process.

There are many differences in our respective cultures and situations in life, and in the focus of our concerns about the educational system. For those of us who are American Indian, for example, issues relating to tribal sovereignty are of paramount concern. For those of us who are Puerto Rican, issues relating to language and to migration to and from the mainland are critical. Indeed, there is no monolithic "minority" population, but all of us do share two essential convictions: we believe the system is failing our children; and we believe that unless we play a major role in changing that system to include education that works for minority students, educational reform will not succeed.

This Plan is based on the advice and experience of hundreds of minority and nonminority educators, policymakers, community leaders, researchers, parents, and students, who participated in meetings held by the QEM Project around the nation. At least ten critical points emerged from their testimony:

(1) **Despite well-documented problems, many Alaska Native, American Indian, Black American, Mexican American, and Puerto Rican students achieve at the highest levels.** We know how to help minority students succeed. Evidence comes from around the country: the Comprehensive Science and Mathematics Program in New York City; James Comer's New Haven Project; the Valued Youth Partnership Program in San Antonio; the Benjamin E. Mays Academy in Atlanta; the Santa Fe Indian School; the Resource Center for Science and Engineering in Puerto Rico; the North Slope Higher Education Center in Alaska, and many more. Successful programs and strategies like these are too often underfunded, isolated, or ignored. What is necessary is a comprehensive set of strategies, sustained national leadership, and commitment to high performing schools and educational equity.

(2) **No subject is more important to providing quality education for minorities than the restructuring of schools.** The consensus building around the country—reflected in the recent education summit with the nation's governors hosted by President Bush—is that schools must be fundamentally restructured so that student achievement becomes the primary criterion by which teachers and administrators are judged and rewarded. Efforts at restructuring must value minority students; assume responsibility for their learning; be sensitive to their backgrounds, language, and cultural values; and be adequately funded. Any national goals for education, such as those to be proposed by the governors in 1990, must include a vision to improve the education of our students.

(3) **People learn in many different ways, and pursue countless parallel paths to reach their educational goals.** Focusing upon the traditional pipeline—elementary school, middle school, high school, and college or professional school often overlooks the fact that many people drop out, return later in life, and need second-chance alternatives. Alternative strategies are needed to improve educational options.

(4) **We must address all levels and systems of education.** Improvements at each point affect all other points. The weak links between pre-school and kindergarten, middle and senior high school, high school and college, two- and four-year colleges, and between adult literacy and other adult educational opportunities, place our students at greatest risk.

(5) **Learning is not confined to the classroom.** Among the reasons that our children fall behind in school is that they are denied many of the out-of-school learning experiences enjoyed by more affluent students, including summer programs, foreign trips, museum visits, and academically reinforcing work experiences. Indeed, some of the most effective learning takes place outside of the traditional school. The Job Corps, for example, has taken youngsters who were not successful in traditional schools and has vaulted them years forward in learning in just months of accelerated programs.

(6) **Conditions affecting learning often begin outside school boundaries.** It is difficult for children to excel in school if they are cold and hungry, if they have teachers who do not believe in them, or if their language and culture are not valued. If financial costs of college are insurmountable, if the racial climates on college campuses are inhospitable, or if career opportunities are not available upon graduation, then minority students may not aspire to graduate or to attend or excel in college. To improve our education, we must have not only better schools, we must also have better housing, health nutrition, job opportunities, and adequate student financial assistance.

(7) **Minority families, communities, and institutions must share the responsibility for changing the system, working with nonminority policymakers and educators.** There is a long tradition of commitment to education in all our groups that we must renew and strengthen. After all, it was our parents and people who initiated the legal challenges that tore down "separate but equal" schools and inequitable school financing policies.

(8) **Families must become full partners in the educational process—at home and at school.** There are several forms of parental involvement: a) providing for the child's basic physical and emotional needs; b) understanding the child's academic program; c) monitoring the interaction between the child and the school; d) encouraging and participating in learning activities at home; e) taking part in educational governance; and f) maintaining continued communication with schools, teachers, and administrators. Our parents must be advocates for change.

(9) **Equitable school financing and allocation of resources to schools are critical to achieving educational excellence for minority youth.** Inequity in school financing, and the resultant poor and dangerous physical conditions found in some schools are detrimental and hinder the performance of teachers and students. Too often, the per-pupil expenditures for poor and minority children are far lower than levels in more affluent areas. Opinion polls show consistently that the public supports greater spending on education, if the money is spent wisely. We believe that if the public fully understood the cost of not making these investments—in crime, health care, falling productivity, and social decay—the support would be even greater. We believe that those costs are already obvious and, if swift and radical changes are not made, will become more so as we approach the next century.

(10) **A simple and fundamental concept underlies whatever changes are to be made in the schools: Schools are responsible for educating their students.** Being responsible means being accountable for student performance. Such schools will of necessity be concerned with parental involvement, with out-of-school learning opportunities, with curriculum reform, with health and social services, and with other factors affecting educational performance. Accountability means, among other things, that proper support and assistance should be provided to teachers and administrators who seek to develop high-performing schools and, that if performance does not improve, others will take charge.

GOALS FOR THE YEAR 2000

President George Bush and the governors of the 50 states are preparing to set national goals for the educational performance of American youth. These goals must include specific measures for the achievement of those most in need of educational improvements: minority Americans. Therefore, we challenge the president, the governors, and the nation to:

GOAL 1

Ensure that minority students start school prepared to learn.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- Increase access to quality pre- and post-natal health care.
- Increase participation in child nutrition programs.
- Ensure that every pre-schooler has access to quality day care and early childhood education.
- Enable all parents to better assume their roles as first teachers of their children.

GOAL 2

Ensure that the academic achievement of minority youth is at a level that will enable them, upon graduation from high school, to enter the workforce or college fully prepared to be successful and not in need of remediation.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- Ensure that tracking does not occur at any point along the educational pipeline.
- Bridge any performance gap between nonminority and minority students by the fourth grade.
- Make certain that minority students leave elementary school with the language, mathematical skills, and self-esteem that will enable and encourage them to succeed.

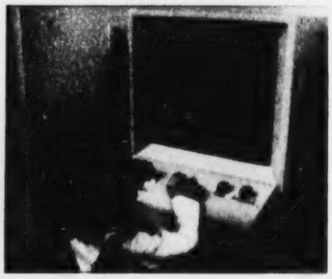
- Ensure that minority youth are excelling in core academic courses by the eighth grade that keep their college and career options open.
- Achieve, at a minimum, the same high school graduation rates for minority and nonminority students.

GOAL 3

Significantly increase the participation of minority students in higher education, with a special emphasis on the study of mathematics, science, and engineering.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- Provide all high school students with a rigorous academic core so that they are adequately prepared for college.
- Enroll minority students as undergraduates at least in proportion to their share of the college-age population, now at roughly 25 percent.
- Increase the number of minority students who transfer from two- to four-year institutions from about 15 percent of those in two-year colleges to 30 percent.
- Triple the number of minority students receiving baccalaureate degrees, from 88,000 in 1987 to 264,000 in 2000.
- Quadruple the number of minority students receiving baccalaureate degrees in the physical and life sciences and engineering, from about 17,000 in 1987 to 68,000 in 2000.
- Triple the number of minorities receiving doctorates, especially in science and engineering. In 1987, just 389 American minority students earned doctorates in the science and engineering fields. In 2000, at least 1,200 should earn these degrees.



GOAL 4

Strengthen and increase the number of teachers of minority students.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- Quintuple the number of minority college students newly qualified to teach who enter teaching from about 6,000 to 30,000 by 2000, with a special emphasis on mathematics and science teachers.
- Triple the number of minority tenure track professors in science and engineering fields from 400 in 1985 to 1,200 in the year 2000.
- Increase by one-third the number of certified bilingual teachers, an increase of about 35,000 by the year 2000.

GOAL 5

Strengthen the school-to-work transition so that minority students who do not choose college leave high school prepared with the skills necessary to participate productively in the world of work and with the foundation required to upgrade their skills and advance their careers.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- **Ensure that all children, college-bound or not, graduate from high school having completed a core curriculum that prepares them for a career-track position.**
- **Make apprenticeships or other job training programs available for every noncollege-bound minority child in the 22 largest predominantly minority school districts, as well as in rural districts.**

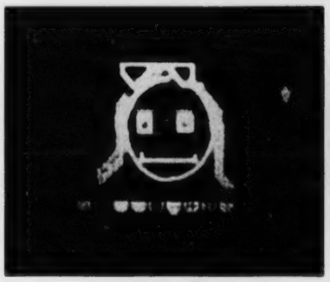
GOAL 6

Provide quality out-of-school educational experiences and opportunities to supplement the schooling of minority youth and adults.

THIS GOAL WILL BE ACHIEVED WHEN WE:

- **Provide after-school, Saturday, and summer experiences for minority youth that will reinforce the learning that occurs during the regular school day and year.**
- **Increase the involvement of minority students in community service projects.**
- **Expand and strengthen second-chance opportunities for the many individuals who do not follow the "traditional" educational pathways.**
- **Increase the participation in postsecondary educational programs such as English as a Second Language, General Educational Development, Adult Basic Education, extension classes, and other life-long learning experiences.**

To achieve all of these goals, our children need more schooling and better schooling from pre-kindergarten to graduate levels. They need teachers of the highest quality, who hold high expectations of them, and who will help nurture the desire to achieve in them. Alternative settings are needed that provide students who have dropped out or who are at risk of dropping out with the skills, confidence, and motivation needed to function successfully. That will require a different kind of educational system, and a different set of attitudes about education. This Action Plan lays out a vision and strategy for achieving that new system. Accomplishing these national goals will require the involvement and commitment of all sectors of society.



WHY WE NEED EDUCATION THAT WORKS

The face of the nation is changing. The minority share of the population of the country is growing. Indeed, the term "minority" has lost its statistical meaning in some areas, for there we are now in the majority. Some 20 percent of this nation is Alaska Native, American Indian, Black, or Hispanic; by about 2020, one-third of the nation will be minority, including Asian Americans. By the last quarter of the 21st century, largely as a result of immigration and differing birth rates, we are projected to be in the majority. It is a change for which the nation is not prepared.

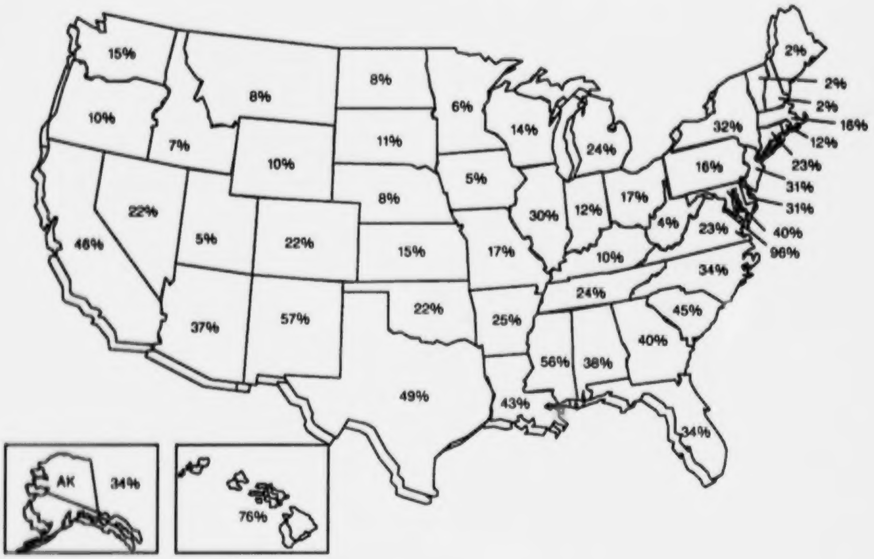
The impact of this change on the quality of life in the United States will be fundamental. Americans must learn to live with one another in a multicultural society, respecting and valuing differences and common traditions. The nation faces questions of equity, peace, and the common good as we grow in numbers and in influence in the public and private sectors.

In our schools, the question of what the future holds for the United States has already arrived. Between 1968 and 1986, the number of White school children fell by 16 percent, the number of Black children increased by 5 percent, and the number of Hispanic children by 100 percent. Mississippi and New Mexico have "majority minority" public schools, and California and Texas are about to join that list (see Figure 1). Overall, more than 30 percent of students in public schools—some 12 million—are now minority. The demographics make it clear that the country cannot discuss changes to its educational system without focusing on the needs and perspectives of our students.

The continued pattern of segregation of our children in separate and underfunded schools and school districts heightens the importance of these issues, especially in predominantly minority regions and cities. While there has been some success in school desegregation over the last twenty years, in general segregation has not decreased significantly since 1970. In some areas it has worsened in the last decade. Today 22 of the 25 largest central city school districts in the nation are predominantly minority.

Many schools, including those with predominantly minority student bodies, continue to operate with outmoded curricula and structures based on the assumption that only a small elite will have or need to have substantial academic success. The problems our children face in and out of the classroom—racism, poverty, language differences, and cultural barriers—are not adequately addressed in today's typical school. We have had, consequently, low achieve-

FIGURE 1
MINORITY ENROLLMENT BY STATE, K-12 LEVELS, 1986
(Percent)


15%
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32%
18%
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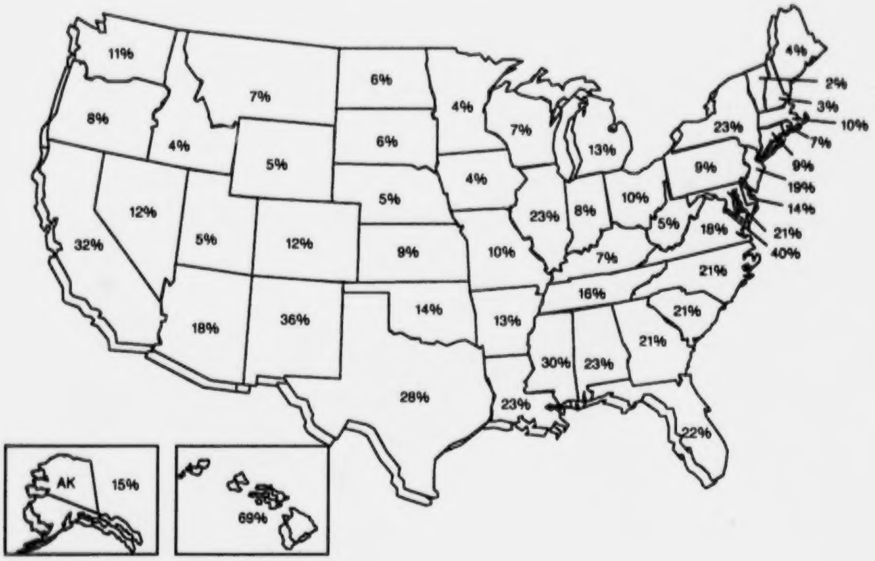
17%
16%
4%
23%
10%
34%
24%
17%
22%
25%
45%
37%
57%
56%
38%
40%
49%
43%
34%
AK
34%
76%

Source: U.S. Department of Education
Includes Asian Americans

FIGURE 2
MINORITY ENROLLMENT BY STATE, POSTSECONDARY LEVELS, 1986
(Percent)


11%
8%
7%
4%
5%
6%
6%
5%
4%
4%
7%
13%
4%
2%
3%
10%
23%
7%
9%
9%
19%
14%
21%
40%
12%
32%
5%
12%
9%
10%
23%
8%
10%
5%
18%
7%
21%
18%
14%
13%
21%
18%
36%
30%
23%
21%
28%
23%
22%
AK
15%
69%

Source: U.S. Department of Education
Includes Asian Americans

ment and high dropout rates.

From the first day of class, the message many of our students receive is "You will not amount to much." They attend crowded classrooms with fewer resources. Their teachers are frequently less experienced, often live outside of the community, and just as frequently are unfamiliar with or uninterested in the culture of our children. Their courses are generally less challenging. Their predominant mode of instruction is drill and practice. Keeping order in class takes precedence over interactive learning and problem solving. Many who persevere to graduation face the fact that their education may mean little in the job market, and may leave them vastly underprepared for college or life. We have a system in place that prepares our students for failure.

Our children are continually told that if they will try harder, they will succeed. That is often true. But their tragedy and that of the nation is that, at least as often, it is untrue. The fundamental reality of educational reform for most minority children is that so little of it has been to their benefit. The rush to raise test scores, to institute competency tests, and to increase teacher standards without addressing root causes of problems has served more to cull than to harvest minority youth.

It is in the schools, the increasingly minority schools, that the economic future of the United States will be determined. The nation's schools, as currently structured, will not provide the skilled workforce the nation needs to sustain itself. The economic and demographic changes facing our country make a quality education—education that works—essential for all of us.

"[T]he educational reform has not been effective in narrowing the educational attainment gap between White and minority youth. The cause of the gap is not that these children are inherently different, but that the schools they attend have less of everything we believe makes a difference; lacking good teachers, a rich curriculum, equipped facilities, and most important of all, a belief that these youngsters can really learn. Minority students who manage to attend above-average schools are often slowed by the prevalence of [ability] grouping and tracking. . . ."
Kati Haycock, Former Executive Director, The California Achievement Council, QEM Project Hearings, Los Angeles, June 1988

THE GLOBAL STRUGGLE

By virtually every important measure of a strong economy and a healthy society, the nation is falling behind or standing still, which now amounts to the same thing. Each year during the 1980s, Americans have consumed more than they have produced. The difference has been made up by heavy borrowing, much of it from foreigners, and by depleting infrastructure and capital: we are eating up our seed corn. Between 1980 and 1986, production per worker in the U.S. rose by 2.2 percent, while consumption increased by 8.8 percent and investment per worker fell by 16 percent. In the meantime, the federal deficit tripled; interest on the national debt now consumes almost 15 cents of every tax dollar.

Slow productivity growth has translated into stagnant real incomes. The real wages of full-time working males were lower in 1987 than in 1973, and wages are higher in Germany, Sweden, and Japan than in our own land. As wages have fallen, poverty has grown: 32 million people, about 13 percent of all Americans, now live in poverty. Twice as large a percentage of American children are in poverty as in Japan or any major Western European country. A growing number of citizens are threatened with permanent second-class status, and society's unwillingness to equip all Americans to participate in the national economy may well consign the nation to like status in the global economy.

THE IRREVERSIBLE SHIFT

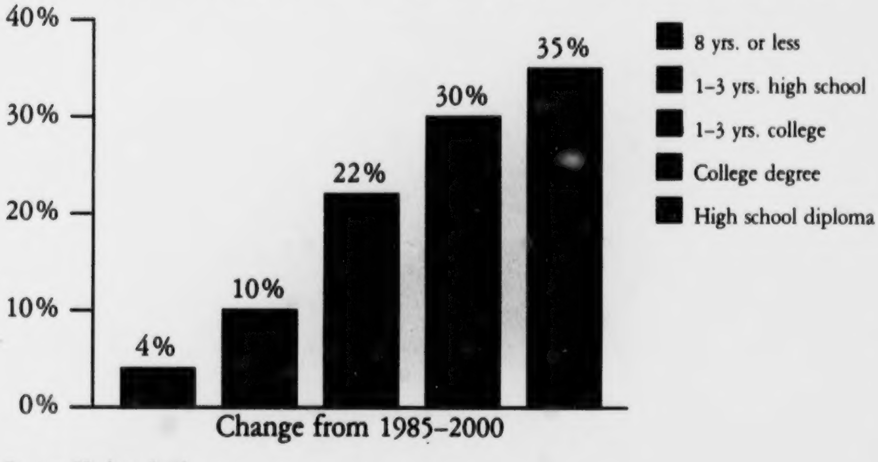
Among the causes of these difficulties is the irreversible shift that, within this generation, has created a new foundation for economic power among the industrialized nations. Technological change and internationalization have greatly changed the basis of national power. In the past, America's wealth and economic strength were due in large measure to bountiful resources and economies of scale made possible by mass production for the large and growing internal American market. Today, new technologies, especially the widespread use of information systems, undermine mass production processes and organizational forms. In an internationalized world market, competitiveness depends mainly on quality, productivity, and flexibility—all matters that received inadequate attention in mass production systems. A global, knowledge-based economy requires workers who can develop and use advanced technologies. It is therefore no longer possible for the American economy to achieve the easy improvements in productivity formerly derived from economies of scale.

The preeminent condition for both personal progress and national wealth has shifted—irreversibly—from competitiveness based on economies of scale to competitiveness based on the productive union of technology with a skilled workforce. As the MIT Commission on Industrial Productivity has pointed out, the effective integration of human resources and emerging technologies is now the principal driving force for growth and productivity.

A QUALITY WORKFORCE

Thus, if the United States wants to compete as a first-class economy, it is imperative that it develop its human resources to much higher levels of skill and competence. Because being able to compete successfully depends on the ability to develop and use advanced technology, we must have the best-educated and best-trained workforce in the world, not merely in leadership positions, but throughout the system. Especially important will be developing the talents of minorities who, along with White women and immigrants, will constitute almost 90 percent of the net growth of our workforce for the rest of this century. This is not an option but a necessity; and the need is not eventual, it is immediate.

FIGURE 3
EDUCATIONAL REQUIREMENTS FOR NEW JOBS WILL RISE: 1985–2000



Source: Hudson Institute

Not only will the workforce look different, so will the work requirements. The new jobs necessary to remain competitive in the global economy will require higher levels of skill. Not long ago a high school diploma was a ticket to the future. That is no longer true. Today's high school diploma is only the passport one needs to begin the journey. The real ticket is the skill that can be acquired only by further education. As the Hudson Institute, made clear in *Workforce 2000,* between now and the year 2000, for the first time in history, a majority of all new jobs will require postsecondary education. (see Figure 3).

At present, the best of America's scientific workforce is still among the world's finest because, despite the advances of others, our nation retains a technological lead in many areas. That lead is sustained primarily by the quality of our major research institutions, which are among the finest in the world. It is also sustained because we still attract a significant portion of the best technological and scientific minds from around the world.

The uneven quality of the rest of the workforce, however, leaves the nation increasingly vulnerable. While we are still the world's richest economy, we are losing our competitiveness and dissipating wealth at an alarming rate.

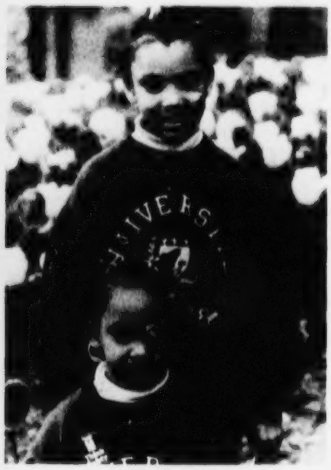
CHANGING DEMOGRAPHICS

The crises in our economy and in our schools are exacerbated by some demographic developments that should create a sense of urgency about improving the performance of both systems. One of these is the changing racial composition of our workforce: minorities are increasing faster than the rest of the population. Indeed, the Bureau of the Census predicts that by the year 2000, minorities, who today are one-fifth of the national population, will have accounted for 60 percent of the total population growth. White males, presently the main source of most elite workers in the mass production system, will constitute less than 10 percent of the net growth of our workforce between now and 2000. Blacks and Hispanics already constitute majorities of the students in almost all of our large city school systems. Indeed, by 2080 non-Hispanic Whites will probably be a minority of the U.S. population. In other words, the greatest growth in our population and workforce will be by people who currently are served very poorly by our schools.

A second demographic factor is the aging of the American workforce. The large baby boom generation of more than 75 million will start reaching retirement age by the year 2010. There is therefore a need for substantial improvements in the economy over the next 20 years. Otherwise, the health and pension requirements of an aging population will greatly restrict the resources available for investment and other uses. And investment in physical and human capital will be a major determinant of our economic strength.

Another important demographic development was the drop in birth rates after 1965, which translates into slow growth in the workforce and possible labor shortages in the 1980s and 1990s. There are likely to be especially serious shortages of highly skilled workers, but much joblessness among the unskilled and uneducated.

The good news is that the American economy, despite its problems, remains strong. With the proper policies, the well-educated baby boomers and highly motivated minorities could be the source of substantial improvements in



productivity and economic performance, provided, of course, that all of our people—especially minorities—are given the kind of tools they will need to function effectively in the international information world.

THE CHALLENGE

The task before us is clear. America must put an end to the educational neglect of our children, because ending that neglect is part of the answer to America's larger problems. The road to the future must be paved with the achievements of our students. As a new century opens, we must all reclaim the distinctively American promise so well articulated half a century ago by Franklin D. Roosevelt: "We seek to build an America where no one is left out." And we must do so not only because it is right, though that is reason enough, but because the future well-being of the nation—nonminority and minority—has placed that task so unmistakably before us.

INSIGHTS:
THE MINORITY EXPERIENCE IN AMERICAN EDUCATION

In the forty-four years since *Méndez v. Westminster School District* and the thirty-five years since *Brown v. Board of Education* formally desegregated public schools, many of our youth have made enormous progress in high school completion, in better test scores, in greater college enrollment, in obtaining college degrees, and in careers. In fact, studies have shown that Black students who attended desegregated schools are working in occupations less commonly held by Blacks and are more likely to be working in white-collar and professional jobs than those from segregated schools. General trends do not adequately reflect the outstanding academic achievements earned by millions of our young people and adults each year. The endless stream of negative statistics tends to overshadow the individual accomplishments of those who have found their way around the barriers and through the closed doors.

However, some facts cannot be avoided. First, while minority educational attainment has improved, the amount of education needed to have a real chance in life has grown even more. Second, the general trends do not reflect how truly depressing educational conditions are in some schools, in some regions, or for some groups. Nor do they reflect the decline in some areas, such as the percentage of minority high school graduates enrolling in college, that has taken place in the 1980s.

Third, as much as we have gained, the gap between White and minority achievement remains unbridged. That gap must be closed; an even higher level of achievement by all youth must be the nation's goal.

> "[S]chool reform. . .has not focused on the heart of the problem within educational institutions; that is; the deeply ingrained systemic inequities that deny minority students, at each phase of the educational pipeline."
> *Gary Orfield, University of Chicago, QEM Project Hearings, Chicago, June, 1988*

TRENDS

Many minority and low-income children begin school without the learning and social skills required to succeed in the present school system. In the earliest years of school, children are separated by perceptions of their abilities. Teacher expectations are often low for our children, particularly those with cultural and language backgrounds or preparation at home different from those of the teacher. "Ability" testing of children can begin as early as the pre-kindergarten level. Minority children are frequently placed in low-ability or remedial tracks, from which it is nearly impossible to escape.

By third or fourth grade, minority and nonminority achievement levels begin to diverge. At this point, minority children are more frequently placed in low-ability classes and are more likely to be placed in classes for the educable mentally retarded and other special education classes. Although similar experiences frequently happen to the children of poor Whites, it happens disproportionately more often to our children.

By the middle school years, test scores show on average that minority children are a year or more behind. By the end of high school, a three- to four-year achievement gap between minority and nonminority youth has opened on tests such as the National Assessment of Educational Progress (NAEP), which measures the ability of students to use knowledge. By age 17, the average minority student achieves at a level equivalent to that of White 13-year-olds, according to the NAEP.

"[In Chicago,] 87 percent of the Black children attend racially isolated schools and schools with children from the same socio-economic backgrounds. They are often taught by substitute teachers, or teachers who lack appropriate credentials. Quality education for Black children is possible. It can occur, but it will occur school by school and not by fiat from above."
Ora McConner, Assistant Superintendent, Chicago Public Schools, QEM Project Hearings, Chicago, June, 1988

THE RESULT FOR OUR STUDENTS

Our students are pushed out or begin dropping out of school in significant numbers as early as the 7th grade. The reasons include being behind in classwork, experiencing low teacher or personal expectations, having to work, becoming teenage parents, being involved in gangs, and relieving boredom.

Dropout rates among Black youth have declined greatly over the last decade. In 1988, according to the U.S. Census Bureau, about 15 percent of Black youth aged 16-24 had not graduated and were out of school, reduced by almost half from the 27 percent rate measured in 1968. But for Hispanic youth, the similar rate in 1988 was nearly 36 percent, about three times the rate for White youth. Recent dropout data for Alaska Native and American Indian youth are not available, but the U.S. Department of Education's *High School and Beyond* study showed dropout rates for these students at 36 percent in 1982 (see Table 1). By 1986, many more of the students followed in that study had graduated, but minority-nonminority differentials remained.

TABLE 1
1980 HIGH SCHOOL SOPHOMORES WHO DID NOT GRADUATE AND WERE NOT IN SCHOOL
(Percent)

Group	**By 1982**	**By 1986**
White	14.8	7.6
Black	22.2	11.4
Hispanic	27.9	18.0
American Indian/Alaska Native	35.5	27.1
Asian American	8.2	2.0
Total:	**17.3**	**9.2**

Source: U.S. Department of Education, *High School and Beyond*

HIGHER EDUCATION

The logical consequence of a public school system that continues to fail our children is lower performance on the Scholastic Aptitude Test (SAT) and the American College Test (ACT). Most high school students take one or the other as part of their applications for college. There is some reassurance but little comfort in the fact that the score gap between Whites and most minority groups is smaller today than in the mid-1970s. In 1989, as can be determined from Table 2, the combined SAT verbal and mathematics scores for White students were still 27 percent higher than combined scores of Black students, 22 percent higher than scores of Puerto Rican students, and 15 percent higher than scores of American Indian and Mexican American students. As discussed later, test scores alone are poor measures of the potential of students: issues relating to language, bias, and preparation call into question the value of standardized tests in judging the abilities of many minority students. Nor do such measures take into account the interpersonal skills, language abilities, reasoning abilities, and other talents that students will use in the real world. However, the tests do give us a glimpse of the disparities that exist in test-taking abilities of White and minority children and indicate the failure of the educational system to address these and other flaws in the educational experiences of minority children.

TABLE 2
SCHOLASTIC APTITUDE TEST SCORES, IN SELECTED YEARS, 1979–1989

	1979	1982	1985	1987	1989	Change 1979-89
Verbal						
American Indian	386	388	392	393	384	– 2
Black	330	341	346	351	351	+ 21
Mexican American	370	377	382	379	381	+ 11
Puerto Rican	345	360	368	360	360	+ 15
White	444	444	449	447	446	+ 2
Math						
American Indian	421	424	428	432	428	+ 7
Black	358	366	376	377	386	+ 28
Mexican American	410	416	426	424	430	+ 20
Puerto Rican	388	403	409	400	406	+ 18
White	483	483	490	489	491	+ 8

Source: The College Board, *Profile of SAT and Achievement Test Takers*

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instructional practices, and testing practices that limit learning.

The limited English proficiency student population is of a significant size: between 25 percent and 30 percent of all students in California and Texas; and ranging from 3.5 to 5.5 million for the nation. These students need instruction that builds on their first language and moves them toward the development of proficiency in English.

Special attention is also called for in the education of immigrant children and adults. Because of the large number and projected growth rate of foreign-born students in California (16 percent) and particularly in metropolitan areas in the Southwest such as Los Angeles, schools must pay more attention to meeting their educational needs. An estimated 3 million persons applied for legalization and Congress appropriated funds for their education; adult education systems can have an impact on the short-term education of these adults and on the long-term education of their children.

WHAT ARE THE PROBLEMS FACING MEXICAN AMERICAN YOUTH IN SCHOOLS?

Our educational systems have not served Mexican Americans well. The specific reasons have varied somewhat across regions and time; however, the common problems include the following:

- The creation and maintenance of segregated schools. Beginning with *Méndez* v. *Westminster School District* in 1945, nine years before the *Brown* case, and followed by *Delgado* v. *Bastrop Independent School District* in 1948, the Mexican American community began to use the courts to challenge the segregated (known as "Mexican" schools, though in some cases these were also attended by Black students) and inferior education provided to Mexican-origin students.
- The political and economic barriers placed by agricultural systems. Prior to the significant urbanization after World War II, many rural areas did not offer schooling beyond the sixth grade since it was not deemed necessary for farmhands, and Mexican-origin students were discouraged from attending school. Moreover, agricultural cycles dictated school attendance patterns.
- The non-valuing of the culture and language of Mexican American students, including low expectations regarding the academic potential of Mexican American students; the placing of limited English proficient students in special education classes from which it became almost impossible to escape; and the punishment of students for speaking Spanish.
- The social and cultural distance between teachers (including Mexican American teachers) and Mexican-origin students. Although minority teachers may provide positive role models and have greater insight about the needs of minority students, it should not be assumed that Mexican American teachers will naturally, without proper training, be effective with Mexican American students.
- The absence of continuity of education for children of migrant workers. Geographic mobility and frequent disruptions in schooling place migrant students at significant risk of receiving a limited education.
- The shortage of qualified teachers, vocational teachers, counselors, and other school personnel to work with non- and limited-English proficiency students.

Test scores aside, the success of the country's higher education system in meeting the needs of minority students can best be measured by how many get into college (enrollment), how many stay in (retention), how many achieve the baccalaureate degree (graduation), and how many complete graduate and professional degrees.

Unfortunately, college enrollment and degree attainment indicate the same mixed news. As can be seen in Table 3, the 1.8 million Alaska Native/American Indian, Black, and Hispanic students enrolled in college in 1986 represent the largest minority enrollment in history, but much of that growth simply represents overall increases in population. Further, much of the increase came in the late 1970s: for the entire 1976-1986 period, minority enrollment increased 20 percent, however, between 1980 and 1986, enrollment increased just 8 percent. For Black students, enrollment actually declined between 1980 and 1986.

TABLE 3
GROWTH IN MINORITY ENROLLMENTS IN COLLEGES AND UNIVERSITIES IN SELECTED YEARS, 1976–86
(In Thousands)

	1976	**1980**	**1984**	**1986**	**% Change '76-'86**
Black	1,033	1,107	1,076	1,081	+ 4.6%
Hispanic	384	472	535	624	+ 62.5%
American Indian/Alaska Native	76	84	84	90	+ 18.4%
Totals	**1,493**	**1,663**	**1,695**	**1,795**	**+ 20.2%**

Source: U.S. Department of Education, *Trends in Minority Enrollment in Higher Education, Fall 1976–Fall 1986*

Some additional facts underscore the disturbing nature of enrollment trends:

- A smaller proportion of minority high school graduates go to college than do White graduates, and those proportions have actually been declining since 1976. In 1976, 36 percent of Hispanic high school graduates and 33 percent of Black graduates went on to college. In 1986, 34 percent of White high school graduates went on to college, but only 29 percent of Hispanics and Blacks did (see Figure 4).
- Overall minority enrollment in higher education was about 14 percent of the total in 1986, far less than the roughly 25 percent minority representation in the total college-age population.
- Our students are much more likely than Whites to be in two-year institutions, from which transfer rates to a baccalaureate institution are low. About 36 percent of White students, 43 percent of Black students, and 55 percent of Hispanic and of American Indian students are enrolled in two-year colleges. This differential is extremely significant: many students in two-year colleges are in nonacademic or part-time programs. Transfer rates to baccalaureate institutions are low and hard to determine accurately; estimates range from between 5 and 25 percent.

To adequately address these issues, fundamental changes must be made to the organization and management of schools. These changes must place equity and outcomes as central to the functioning of schools.

PUERTO RICANS

As U.S. citizens with strong ties to both the Island and the mainland, many Puerto Ricans are participants in a steady and ceaseless migration in both directions, leaving children divided between cultures, between languages, and between schools. Puerto Rican society on the Island is racially integrated, but Puerto Ricans on the mainland live in a racially segregated culture. Puerto Rican youth on the Island grow up with Puerto Rican teachers, doctors, and political leaders as a matter of course, but Puerto Rican youngsters on the mainland find role models scarce and the image of their people constantly maligned. Puerto Rican youngsters on the Island grow up speaking Spanish, and on the mainland speaking English, but those in transition often master neither language. No other group faces these obstacles, which must be understood if an effective strategy to improve education for Puerto Rican youth is to be developed.

The Educational Passport

The College Board, with funding from the Ford Foundation, has developed a two-part Articulation Agreement Project between the New York public schools and the Puerto Rico Department of Education. Part of the project is a bilingual Educational Passport, which students can carry with them as they move between the Island and New York City. The passport contains information about the student's academic record, health status, language capabilities, and other information. The passport serves not in place of official records, but to facilitate placement of the student while the permanent records are being sent from the previous school.

POPULATION

The 2.3 million Puerto Ricans on the mainland account for about 13 percent of Latinos in the United States. Adding to that total the 3.3 million on the Island raises the Puerto Ricans' share of the Latino population to about 29 percent. High birthrates and immigration have combined to create a rapid increase of Puerto Ricans on the mainland, about 25 percent between 1980 and 1988. With continued migration, high fertility rates, and the relative youth of the Puerto Rican population, Puerto Ricans will represent an increasing share of the American population in the years ahead.

INCOME

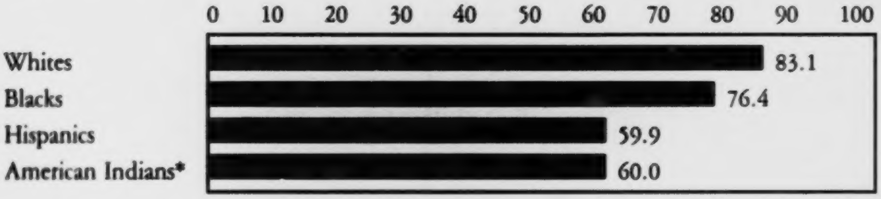
Puerto Ricans are among the poorest of all Americans, with a 38 percent poverty rate in 1987, and average family incomes at about half the national average. Forty-four percent of Puerto Rican families on the mainland are headed by women, and in New York City, not only is the proportion of female-headed households in poverty highest for Puerto Ricans, but in absolute numbers there are more such families among Puerto Ricans than among any other group, including Whites.

RACIAL ISSUES

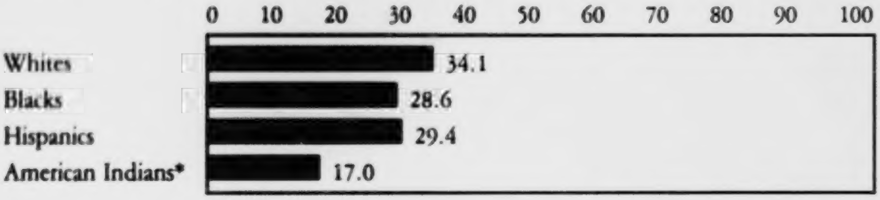
One of the most difficult issues for Puerto Rican youth on the mainland to face, particularly those recently arrived from the Island, is the classification of such youth into racial groups and the stigmatization of those identified as Black. In Puerto Rico, cultural identification dominates over race; hundreds of years of racial mixing has created a society of many colors. The heterogeneity of Puerto Rican society is in sharp contrast to mainland life, where newly arrived migrants found themselves classified by others into one of two groups: Black or White. When mainland-born Puerto Rican children emigrate to the Island, in turn, their sense of identity is confused and some may prefer to think of

FIGURE 4
HIGH SCHOOL GRADUATION AND COLLEGE ENROLLMENT: 1986

High School Graduates as Percentage of 18-24-Year—Olds



College Entrants as Percent of 18-24-Year-Old High Schools Graduates



Source: U.S. Census Bureau

It should be kept in mind that enrollment is not graduation: attrition continues to plague our students. The *High School and Beyond* study of 1980 high school graduates showed that six years later, White students had earned bachelor's degrees at twice the rate of Black students and three times the rate of Hispanic students. In 1986, Hispanic, Black, and American Indian / Alaska Native students represented 14 percent of college and university enrollment, but received just 9 percent of all bachelor's degrees, 8 percent of master's degrees, and just 6 percent of all doctoral degrees (see Table 4). In fact, international students earned nearly four times as many American doctorates from U.S. universities as all Alaska Native, American Indian, Black, and Hispanic students combined. It is clear that the higher up the educational ladder one climbs, the fewer black, brown, or red faces one sees.

The trend is unmistakable; our children are losing ground. An additional observation is deeply disturbing in light of the nation's growing need for technically trained personnel: we are severely underrepresented in science and engineering. Of the more than 73,000 baccalaureates awarded in engineering in 1986, just 6 percent went to non-Asian minority students; of the more than 16,000 mathematics degrees, just 7 percent went to minorities; in the physical sciences, we received just over 7 percent. If we were receiving these degrees in proportion to our share of college enrollment, these figures would be twice as high.

"On most college campuses, issues affecting minority students have been assigned to special offices or separate programs. This dual system has completely negated any institutional responsibility and accountability for the attraction, retention, and education of ethnic minority students. [I]f we expect to make a difference . . . we must make institutions accountable, not for process, but for achievement. [W]e must establish clear goals and clear ways to measure progress, with all segments of the university accountable for their accomplishments."
Herbert Carter, Executive Vice Chancellor, California State University, QEM Project Hearings, Los Angeles, June, 1988

TABLE 4
1986–87 COLLEGE DEGREE ATTAINMENT

Group	Undergraduate Enrollment	Percent of total	B.A.	Percent of total
White	8,552,000	79.2	841,280	85.0
Hispanic	569,000	5.2	26,990	2.7
Am. Ind./Al.	84,000	0.7	3,971	0.4
Black	995,000	9.2	56,555	5.7
Asian/Pac. Is.	394,000	3.6	32,618	3.2
Nonresidents	204,000	1.8	29,308	2.9
Total	**10,798,000**		**990,722**	

Group	Graduate Enrollment	Percent of total	M.A.	Percent of total	Ph.D.	Percent of total
White	1,132,000	79.0	228,870	79.0	24,435	71.7
Hispanic	46,000	3.2	7,044	2.4	750	2.2
Am. Ind./Al.	5,000	0.3	1,104	0.4	104	0.3
Black	72,000	5.0	13,867	4.7	1,060	3.1
Asian/Pac. Is.	43,000	3.0	8,558	2.9	1,097	3.2
Nonresidents	136,000	9.4	29,898	10.3	6,587	19.4
Total	**1,434,000**		**298,341**		**34,033**	

Source: U.S. Department of Education

A CLOSER LOOK

To more accurately portray the common as well as unique characteristics of Alaska Natives, American Indians, Black Americans, Mexican Americans, and Puerto Ricans, this section presents brief profiles of each group. Each section highlights some of the more important historical events and characteristics that shape the educational status of the particular group.

ALASKA NATIVES

In 1989, Alaska Natives numbered an estimated 75,000 individuals or about 14 percent of the state's population. Due to heavy in-migration of non-Native populations, Alaska's Native population has been decreasing as a percent of total population since 1930 when it accounted for 50 percent of the total.

Alaska is home to three distinct Native groups, the Eskimos (Inupiaq and Yupik), Aleuts, and American Indians (Athabaskan, Tlingit, Haida, Tsimshian, Eyak, and others). Alaska Natives encompass a rich diversity of culture and tradition, and there are twenty Alaska Native languages. Alaska Natives are organized into more than 200 villages and about 60 percent live in rural areas of the state.

HISTORICAL PERSPECTIVE

Prior to the arrival of the Russians and Americans, Native villages in Alaska had an organized system of educating youth. Instruction was conducted in a "learning by doing" process under the watchful eye of a tutor, usually a relative. The customs, language, and skills taught were directed by local priorities and the environment in which people lived; education was an internal responsibility of the village. This system of education was clearly effective; it allowed the Native population to survive in an unforgiving environment for thousands of years.

With the coming of the Russians and Americans, the process of indigenous education deteriorated. Children were shifted from learning in their environment to learning in a classroom from teachers from a foreign culture. Through successive periods of the Russian schools, missionary schools, the Bureau of Indian Affairs schools, territorial schools, and public schools, educating youth became the responsibility of someone outside the community. The underlying American philosophy of education was to "civilize" Alaska Natives by moving them away from basic culture. Native languages, games, and dances were banned at schools. Education became a process which alienated youth from their communities and culture. However, in some of the more isolated villages across Alaska, local cultures and languages survived and remain alive and strong today.

Schooling was segregated; and for Alaska Natives, high school often meant the separation of children from their parents in boarding schools. Studies revealed that half of the boarding students under these mandatory arrangements experienced school-related social and emotional problems. Dropout rates were high and achievement was low. In the 1970 Census, only 37 percent of Natives between 18 and 24 had graduated from high school, as compared to 68 percent of non-Natives.

The 1970s marked several monumental changes in the education of Alaska Natives with the passage of the Bilingual Education Bill and decentralization of rural school governance to Regional Education Attendance Areas (REAAs). Although the REAA initiative did not give full control to local authorities, it established a mechanism for providing stronger local ownership of education. Further, in 1976, the State of Alaska entered into a judicial consent decree to provide high schools for students in their community of residence. Under this settlement, Alaska agreed to construct and operate a high school in any village with eight or more students.

At a national level, the U.S. Congress passed the Indian Education Act in 1972 which created several programs that benefited Alaska Natives and offered the opportunity for parent committees to help design the programs their children attended. Passage of the Indian Education Self Determination and Education Assistance Act in 1975 encouraged the government to contract with Indians for services such as schools to be operated by themselves for themselves. In response, five Alaska Native communities organized contract schools.

As a consequence of these changes, education was returned to the village and responsibility for education was brought home. Alaska Native parents and community organizations have responded by taking a major and growing interest in education. Education is a pressing concern of Native organizations such as the Alaska Federation of Natives and the Tanana Chiefs Conference. In addition, Native parents have organized several groups to voice their concerns. Interest was heightened with the publication in 1988 of test scores in basic skills by the Alaska Department of Education, which clearly revealed low performance by students in predominantly Native school districts.

"...Native cultures had a traditional education system prior to the arrival of Western education; it enabled people to survive a harsh environment for several thousand years. It involved parents, uncles and grandparents teaching youths about survival. We need the Western educational system, but we should build upon the traditional rather than replacing it."

Cora Sakeagak, Board Member, North Slope Borough School District, QEM Project Hearings, Anchorage, August, 1988

THE PRESENT SITUATION

The dropout rates for Native students remain high in urban areas, but thanks to the return of secondary education into local communities, the Native dropout rate has been reduced dramatically in rural schools. Student achievement is a growing concern, with children in the rural districts scoring in the 25th to 35th percentile on standardized tests. Many Native high school graduates are academically unprepared to go to college, and college attrition rates among Alaskan Native freshmen are reported to be as high as 60 percent.

Adjusting to an urban college environment clearly poses major problems for many Native youths from rural areas. Several creative programs have surfaced to deal with these problems. For example, in the Yukon-Koyukuk School district, high school counselors have responsibility to follow up with the district's graduates and offer assistance through the first year of college. Summer institutes have been established at the University of Alaska-Fairbanks and the University of Alaska-Juneau to help acclimate students to college life and boost their academic preparation. Another proposal that has been made is to create a thirteenth-year boarding school option as special preparation for college-bound rural youth.

Most Alaska Natives want a boarding school option as an alternative to the small rural high school. This is reflected in the attractiveness of the Mt. Edgecombe residential academy which was opened by Alaska in 1986-87 as a magnet school on Pacific Rim studies and administered by the state Board of Education. The school enrolls 200 students and has an equal number of students on a wait list.

Hearings conducted jointly by the QEM Project and the Alaska Senate Committee on School Performance highlighted several findings.

- Some schools and teachers do not value Native cultures. Alaska history, incorporating Native cultures and languages, is rarely offered in schools. First language programs for Native language speakers are too few, often of inadequate quality, and are of insufficient duration. Village schools resemble schools their teachers attended much more than they reflect the cultural values of the village. Some textbooks demean minorities.
- Teachers' expectations are low for Native students. Coursework is too rarely demanding or rigorous.
- Too often, Natives who have problems with English proficiency are miscategorized as special education students, producing in them a sense of inferiority. Teachers fail to build self-esteem in students.
- Some villages get the worst teachers, but tenure keeps them from being dismissed. Some teachers are uncaring.
- There is a critical need to attract Alaska Natives into the teaching profession. As of July, 1988, only 170 (or 2.7 percent) of the statewide teacher workforce of 6,372 were Alaska Native. At the same time, Alaska Natives comprised an estimated 20 percent of total student enrollments in K-12 schools. Experts who teach Native language and cultures do not have access to the recognition they deserve through alternative certification.
- Teacher training institutions must help non-Native teachers develop an understanding and appreciation of Alaska Native languages and cultures so that all teachers can be more culturally and linguistically sensitized to teach Alaska Native children. Given its diverse Native populations as well as its Black, Asian, and Hispanic populations, Alaska needs teachers who use a multicultural approach to teaching, building on the central values students bring with them to school.
- Early childhood development programs, combined with parent education, are needed to provide Native students the opportunity to begin their formal education on a par with their non-Native peers.
- Small rural schools with few teachers offer a limited variety of courses and extracurricular activities to Alaska Native children. Increasing course and teacher variety can be accomplished through better use of distance learning technologies, staffing, curriculum innovations, partnerships with universities

Culture and Language

On the North Slope in Alaska, involving parents in their children's education is difficult, because many of them lack high school and even eighth grade education, and only speak the Inupiaq language. As part of their training, North Slope teachers and administrators learn Inupiaq. Fifteen full-time Inupiaq language teachers are also employed in the schools.

This approach has paid off handsomely. Student achievement has been moved from the 1st percentile to the 30th percentile. Today, the district's first and second graders are performing on grade level, and 46 percent of last year's high school graduates in the borough entered college or postsecondary training. Says school official Brenda Itta, "We are in a grieving process over cultural transition, and we are fearful of losing our language and culture." But, she adds, "I look forward to a bright future, based on the intelligence I see in our youth."

—QEM Project Hearings
Anchorage, August, 1988
Albuquerque, September, 1988

and other schools, and other techniques. However, as past experience has demonstrated, new technological tools must be integrated into instructional practices and teachers well trained to use them effectively.

- Problems outside of school that affect learning have grown. Social problems such as the use of alcohol or drugs have grown; one in four youth in Alaska is estimated to be children of alcoholics and at higher risk of abuse, neglect, suicide, depression, and substance abuse. Alaska's fetal alcohol syndrome rate is the highest reported in the world. The rate of suicide among Alaska Native males between 15 and 24 is six times the national rate for that age group. Alcohol is implicated in two-thirds of all suicides. Cultural conflict and rapid social change are important factors as well.
- Poverty and unemployment remain a significant problem. In 1980, the poverty rate for families with children age 13-17 enrolled in school was 26 percent for Natives as compared with 6.9 percent for Whites. High rates of unemployment persist for Alaska Natives, especially in rural areas, even though as many as 60 percent are not in the labor force.
- Schools have been the most pervasive and persuasive force of deculturalization of Alaska's Native peoples. It is time that schools, in partnership with the Native communities they serve, be used as vehicles for empowering Alaska's Native children to succeed in life.

CONCLUSION: THE NEED FOR MORE AND BETTER EDUCATION

Despite the slump in the Alaskan economy due to the downturn in oil prices, several factors have motivated calls for more and better education for Native youths. Many want to see vocational education strengthened so that jobs that have gone to in-migrants to Alaska in the past can be obtained by the Native population.

The need for college-trained Alaska Natives is rising as well. Passage in 1971 of the Alaska Native Claims Settlement Act and creation of thirteen regional corporations have brought new opportunities for Natives as trained managers, educators, lawyers, and other professionals. Although the college population of Natives has increased somewhat recently, Alaska Natives remain underrepresented and no one forsees sufficient numbers coming through colleges to satisfy these needs. In 1984-85, when Alaska Natives comprised approximately 13 percent of the college-age population in Alaska, they received only 7 percent of associate degrees, 4 percent of bachelor's degrees, and a little over one percent of all master's degrees in the state.

Native villages are becoming increasingly reliant on the cash economy to purchase certain material staples. At the same time, with few exceptions, village areas lack commercially exploitable natural resources and their local economies rely heavily on public spending, especially for governmental jobs. With its oil revenues, Alaska has been able to fund jobs in rural areas, but it is unclear whether and how long such public funding will continue in the future. Despite investment in infrastructure and education from federal and state sources, the increase in self-sustaining economic growth has been minimal in most Native villages.

The Native population is expected to double over the next 25 years. Facing no viable alternatives, many Native youths will be forced to migrate to find work in the modern economy. In this situation, the demands on schooling are great. Alaska Natives want schools to help prepare youth both to live in the subsistence economy and prepare them to take advantage of the modern economy so that youth will have a choice. A common concern is that schools will accomplish neither task very well.

AMERICAN INDIANS

As with our knowledge of their history, our understanding of education among American Indians is incomplete. Even today it is not uncommon to find education statistics for American Indians under the catchall category of "Other." In the 1988 edition of the U.S. Department of Education's *Digest of Educational Statistics,* for example, only 21 of the 303 tables provide any data on American Indians/Alaska Natives, and none reflect tribal differences.

To understand the educational status of American Indians, it is important to understand the evolution of their unique relationship to the federal government. Federal Indian policy has changed often, depending on whether Indian nations and their land and tribal rights were seen as needing protection, or whether these were seen as obstacles to "civilization," preventing assimilation into the "American mainstream." The establishment of schools and education programs have been shaped by the prevailing policy orientation.

American Indians, like the other minority groups discussed in this report, manifest a general pattern of undereducation: lower levels of academic achievement; high dropout rates; a small number of college graduates; and the attainment of few Ph.D. and professional degrees.

Not surprisingly, other negative socio-economic indicators are also shared by American Indians, including the need for public assistance; higher probability of contact with the criminal justice system; high homicide rates; higher use of alcohol; and high unemployment. In 1980, 23.7 percent of all American Indian families were in poverty, and 42 percent of the families on reservations were in poverty. American Indian children thus face most of the risk factors that place all children from poor families in jeopardy.

WHO ARE THE AMERICAN INDIANS?

American Indians at the time of contact with Europeans exhibited great variance in economic life, political organization, religion, kinship systems, settlement patterns, and language. Although federal policies have altered most of the historical social and economic patterns, much diversity persists.

At the time of contact, the present United States territory encompassed native societies that ranged from small hunting and gathering groups (in Alaska, the Northwest, Atlantic Coast, and other locations) to relatively large political confederacies (such as the League of the Iroquois), as well as dense, sedentary communities (like those of the Eastern and Western Pueblos).

At the time of Columbus' arrival, the total population in what became the United States is estimated to have been about 1 million, comprising 200 to 300 societies and some 2,000 language groupings. At least 100 native languages are still spoken today by more than 300 tribes.

Despite vast improvements in data collection and processing, our problems in identifying the American Indian community persist. Self-reporting in the

1980 census under the "race" question, showed 1.4 million American Indians, Eskimos, and Aleuts. This figure is at great variance with the 6.7 million that identified themselves as being of American Indian descent in the ancestry question; thus, American Indians identify themselves as being either less than one percent of the population or three percent.

The identification of "Who is an Indian?" is further complicated by federal statutes and tribal requirements, which can include factors such as whether the tribe is federally recognized, residence, adoption of lifestyles, and varying percentages of Indian blood. Individuals defined as Indians in one tribe may not be so defined in another.

HISTORICAL BACKGROUND

The history of American Indians has been characterized by historian William Hagan as essentially one of a tragic encounter—"tragic because the opposing forces were so unequal" —and because of the permanent impact that contact would have both biologically and culturally. If the total initial population of 1 million is used, the Indian population suffered a decline of 75 percent as a result of warfare and disease since its encounter with Europeans.

Although there have been significant and lasting changes in the majority culture's relationship with Indians since colonial times, the one factor that has remained constant for most of the individual tribes has been the special relationship with the U.S. government. American Indians retain a unique and special legal status; a status that Chief Justice John Marshall labeled as "domestic dependent nations."

THE EDUCATION OF AMERICAN INDIANS

Prior to the arrival of Europeans, American Indian children were educated and socialized by the household and the larger kinship system. Existing learning systems underwent massive changes with the introduction of first Protestant missions and Bureau of Indian Affairs (BIA) schools. The primary aim of these mission efforts was to assimilate forcefully the "barbarian" into Christianity and into becoming an "American." The elimination of the native language and culture was an important strategy in the conversion of the American Indian. Later efforts under the BIA had a similar orientation, although for a period during the late 1920s and early 1930s, the BIA began to take the self-defined needs of American Indians into account.

Educational systems have failed American Indians for a variety of reasons.

- The process and goals of education were defined by the dominant group.
- The language and culture of the Indians were not valued.
- The needs and goals of the various Indian communities were not taken into account.
- Educational programs failed to acknowledge fully tribal sovereignty and the importance of self-determination to American Indians.
- Educational programs assumed a non-existent homogeneity.
- Programs aimed at relocating Indians from reservations to urban centers failed to address the fact that in many cases relocation meant only the shift from one pocket of poverty to another.

Local Control

The Zuni public school district in New Mexico exemplifies how local control over education and parental involvement can help rescue potential student dropouts. Created in 1979, the Zuni school district inherited a dropout rate of over 46.3 percent. Skeptical parents felt they had no stake in the school, then part of a larger district perceived as racist and plagued with substandard facilities.

Cleaning up the school, revising the academic program, and improving counseling services were only a few of the steps the new Zuni district took. It introduced a community-based curriculum development program, bringing parents, students, and teachers in for a three-day seminar to find out what was needed in education. A major concern for the community: the need for more Zuni history, culture, and language in the schools.

The district responded. "After nine years of operation under local, Indian tribal control in a public setting, we've reduced the dropout rate to 2.8 percent," says Hayes Lewis, school district superintendent. He credits this success to the district's efforts to make connections among the tribe, the schools, the Indian Health Service, parents, and others.

— QEM Project Hearings, Albuquerque, September, 1988

In order to address properly the educational needs of American Indians, it is crucial that the importance of tribal sovereignty and self-determination be central to the planning and delivery of educational services.

BLACK AMERICANS

To be Black in America is always to be different. It is to have 350 years of history as Americans and still be strangers here. It is, as W.E.B. Du Bois wrote, ". . . a peculiar sensation, this double-consciousness, this sense of always looking at one's self through the eyes of others."

Blacks are the largest minority group in the United States: 28.9 million in 1985, about 12 percent of the total population. While the nation commonly groups together all peoples of African descent under the rubric "Black Americans," or "African-Americans," they are in fact drawn from a diverse range of cultures and countries in Africa, and later from the Caribbean and from Central and South America.

While the changing economic structure of the post-World War II era sent millions of Black Americans northward, half of all Blacks still reside in the South. Black Americans have become an urban people as well: seventy-seven percent live in urban areas.

SOCIAL AND ECONOMIC CONDITIONS

Despite the abolition of most legal forms of discrimination, the continued shadow of racism remains. Sixty percent of all Blacks find that racism intrudes upon their daily lives and a recent survey showed that 79 percent believe that racial attacks, such as those in Bensonhurst and Howard Beach in New York City, could happen to them. Attacks at NAACP offices, racial unrest on college campuses, the election of a former Klan official to the state legislature in Louisiana, the growing number of racial crimes and assaults documented by the Southern Poverty Law Center and others—all are evidence that racism survived the Civil Rights movement and threatens to renew its attack.

Overall, poverty rates for Blacks are the highest of any group in America: 31.6 percent in 1988, nearly two and a half times the national average of 13.1 percent. That means there were 9.43 million Black Americans were living in poverty that year. The rates for Black children were even higher: 42.2 percent, more than twice the poverty rate for all American children.

Black unemployment rates continue to soar above those for Whites. In 1989, when the unemployment level was about 5.3 percent nationally, Black unemployment was more than twice that level at 11.8 percent. The unemployment rate for Black teenagers was far higher: 34.2 percent, and even those Black youngsters who earned a high school diploma found themselves less likely to be employed than White high school dropouts.

Black family income dropped from 59.2 percent of White family income in 1978 to 56.1 percent in 1987. For the poorest fifth of Black families, real income dropped 24 percent between 1978 and 1987. For Black high school graduates, incomes fell 40 percent in constant dollars between 1973 and 1987, compared to a 9 percent fall for Whites; incomes of Black college graduates increased in constant dollars in that period, but only by about 3 percent compared to 12 percent for Whites.

As a result of the growing gap between the Black poor and affluent, some Black families have left the inner cities for areas where more decent housing and better school systems are available. Those families remaining are increasingly poor, single-parent households with limited prospects for employment and little hope for access to quality education.

The impact of these economic changes on low-income Black males has been especially devastating. A decline in manufacturing and low-skilled jobs, a drop in real mean wages for young Black men, and the continued undereducation of Blacks combine to deny for many Black males the realistic opportunity to help support a family on their incomes. For example, in 1973, more than half (55 percent) of Black males had sufficient earnings to help support a family of three above the poverty line. By 1984, just 23 percent, one in four, had such earnings. The impact of drugs, AIDS, Black-on-Black homicide, and accidents have sent death rates soaring for Black men between the ages of 15 and 44. A Black man has one chance in 21 of being murdered before he is 25. Black men who survive are more likely to go to prison than White men. Although only 6 percent of the total population, Black males make up nearly 46 percent of the prison population.

Fundamental indicators of the quality of life are infant mortality and life span. In 1986, the Black infant mortality rate was more than twice that of Whites. Even more disturbing is that for the first time in this century, life expectancies of Blacks have fallen for two consecutive years.

EDUCATIONAL TRENDS

Compared to the educational attainment of Black Americans before 1960, the gains of the last twenty years are impressive. In 1960, the average Black adult had an 8th grade education; by 1986, the average Black adult had a high school diploma. Black students overall have made truly encouraging gains in the dropout rate, measured at about a 15 percent rate in 1988, and test scores in recent years show some narrowing of the gap between Black and White student achievement.

The major problem facing Black students is that the schools they attend are often separate, and typically unequal. In 1968, 77 percent of all Black students attended predominantly (more than 50 percent) minority schools, while 64 percent attended intensely segregated schools with fewer than 10 percent White students. By 1980, the figures had dropped to 63.5 percent in predominantly minority schools and 33.2 percent in intensely segregated schools. But progress towards full desegregation was halted at that point, and measures of segregation showed virtually no improvement through 1986.

Black students face discrimination within schools as well, making up 16 percent of the student population, but 31 percent of all corporal punishment cases, 25 percent of all student suspensions, 35 percent of those categorized as educable mentally retarded, and just 8 percent of those in gifted and talented programs.

While Blacks have made gains in high school graduation rates and college admissions tests, the number of those high school graduates actually going on to college has declined in the 1980s. With the growth in overall college enrollment, the share of college students who are Black fell from 9.4 percent to 8.6 percent.

A successful approach to improving education for Black Americans must recognize the impact of the economic, social, and educational trends described above, and be part of a larger effort to overturn them. The educational system must address not only the racism within it that holds Black youth back, but also the impact of poverty outside the school walls that can so deeply scar the educational experience.

MEXICAN AMERICANS

Mexican Americans have, since the founding of the nation, been an important part of the society and economy of the Southwest. Their contribution, though not often acknowledged, facilitated the growth and prosperity of the states in the Southwest, as well as the Midwest and other areas of the country, and of specific industries such as railroads and agriculture.

The Mexican-origin population shares many characteristics with other groups defined as "Hispanic." However, in many cases the use of the label "Hispanic" hides the actual variance in socioeconomic indicators. One finds a broad array of labels—Mexican American, Chicano, Mexicano, Hispano, Latin American, Spanish, being used to describe the Mexican community. Each label denotes contextual factors such as language, setting, history, and geography. This variance in group labels is one indicator of the diversity within the group.

Mexican-origin communities have been shaped by similar, though not identical, factors. Some communities (such as in northern New Mexico) were established by Spain, later became part of Mexico, and then, after 1848, were annexed by the United States. Other Mexican-origin communities include significant numbers of households that applied for legalization ("amnesty") under the Immigration Reform and Control Act of 1986; they will become permanent citizens of the United States. Thus, the Mexican American community consists of individuals who have roots in the United States extending back more than 10 generations (even before the establishment of Jamestown) to those who have only recently arrived.

DEMOGRAPHICS

The U.S. Hispanic population (not including the population on Puerto Rico) surpassed the 20 million mark in 1989, according to the Bureau of the Census. This growth represents a 39 percent growth since 1980—a growth that is five times that of the nation as a whole. From 1985 to 2000, the White and Black populations are expected to increase by 7 percent and 23 percent, while the Hispanic population is expected to grow by 46 percent. Mexican Americans comprised the largest subgroup of Hispanics with 12.6 million people.

Close to 90 percent of the Hispanic population is concentrated in 9 states; more than half of all Hispanics live in California (34 percent) and Texas (21 percent) alone. The majority of the Hispanics in these two states, as well as in the other Southwestern states, are of Mexican descent. A significant Mexican-origin population can also be found in Illinois. Although people of Mexican descent are the largest Hispanic subgroup, they are not the fastest growing segment. Central and South Americans increased by 67 percent between 1982 and 1989; while the "other" Hispanics increased by 31 percent, and Mexican Americans by 30 percent.

Half of the growth in the Hispanic population is due to immigration and the other half to births. The growth in births is largely due to the youthfulness of the population—for the total American population the median age is 32.2 years; for all Hispanics it is 25.5 years; and for Mexican Americans it is estimated to be 23.9 years, the lowest median age among Hispanics. Cuban Americans, on the other hand, have a higher median age (38.7 years) than the total population.

POVERTY

Like the other minority groups discussed in this report, poverty is endemic in the Mexican American population. Since the late 1970s, poverty has risen almost a third among Hispanics. Between 1978 and 1987, the poverty rate for Hispanics climbed from 21.6 percent to 28.2 percent—the poverty rate increased by much smaller amounts for Blacks and Whites. This contrasted with an overall poverty rate of 13.5 percent for the total population. While the median family income for all families in 1987 was $30,853, it was $20,306 for all Hispanics and $19,968 for Mexican Americans.

EDUCATION

Educational options have gradually improved for Mexican Americans, as evidenced in the number of those attending school, completing high school, and receiving post-secondary degrees. For example, between 1970 and 1988, the proportion of Hispanics that completed four years of high school climbed from 32 percent to 51 percent and those that completed four years of college rose from 5 percent to 10 percent. Thus in some ways the Mexican origin population is experiencing the "best of times."

On the other hand, the severe undereducation of many Mexican American youth and limited access to training for out-of-school youth and adults indicate that perhaps this community is experiencing the "worst of times." The present U.S. economy requires workers with literacy and numeracy, and a large number of Mexican-descent students are not acquiring the knowledge and advanced thinking skills that they will need to obtain high wage jobs or to fully participate in society.

In the total population and among Hispanics, the Mexican-origin population is the most undereducated subgroup. Between 1960 and 1980, while the median years of schooling rose from 6.4 years to 9.1 years for Mexican Americans, the subgroup with the next fewest years of schooling, Puerto Ricans, recorded a gain from 7.5 to 10.1 years. Median years of schooling for Blacks increased from 8.0 years to 12.0 years; non-Hispanic Whites showed a gain from 11.0 to 12.0 years.

The situation, however, need not remain dismal. A critical issue in improving the education of Mexican-origin students is the incorporation of outcome standards and incentives that will make equity and the provision of a quality education to all students central to the functioning of schools. Included in this is the a) appreciation and valuing of the culture and language of Mexican American students; b) change in attitudes and behavior toward students from negative to positive expectations that makes it possible for them to achieve; c) elimination of grouping and tracking practices; and d) revision of curriculum, themselves as "New Yorkers" rather than Puerto Ricans.

EDUCATIONAL TRENDS ON THE ISLAND

On the Island, an increasing pattern of economic separation of children is occurring, with more affluent children attending private schools and low-income children remaining in public schools. In 1960, only 63,000 children attended private schools, while in 1986, the figure more than doubled to 130,400. Nearly 90 percent of the 670,000 students in public schools come from families below the poverty line. Only 40 percent of the population older than 25 has a high school diploma, which is less than half the national average of 86 percent. Half of all dropouts leave Puerto Rico schools at the junior high level. Roughly two-thirds of Puerto Rican youth are graduating from high school at present.

Puerto Rico enjoys a much higher rate of college enrollment among high school graduates than does the mainland: About 83 percent of Puerto Rican high school graduates go on to college, compared to about 34 percent of mainland high school graduates, and just 29 percent of mainland Hispanics.

EDUCATIONAL TRENDS ON THE MAINLAND

Few data are available to detail the educational experience of Puerto Rican youngsters on the mainland. Because Puerto Ricans are still a relatively small group, most educational data still are broken down only into the general "Hispanic" category. Still, enough evidence is available to indicate that Puerto Rican youth face severe barriers to educational attainment. In New York City, for example, where most children classified as Hispanic are Puerto Rican, fewer than half of the children in predominantly Hispanic school districts in 1983 were reading at or above grade level, and just 54 percent were performing at or above grade level in mathematics. Dropout rate estimates for Hispanics in New York City range from 62 to 80 percent. Overall, the Census Bureau estimated that only 46 percent of Puerto Ricans on the mainland had completed high school in 1985.

Students in Puerto Rico appear to be more likely to graduate from high school, and those who do have a much greater chance of entering college than their mainland peers. While students in Puerto Rico are emerging as national leaders in science and technology, as evidenced by the many corporations that recruit for engineers and technicians at Puerto Rican universities, Puerto Rican students on the mainland remain a largely untapped resource.

THE STUDENTS IN BETWEEN

There is a third set of Puerto Rican students who spend time on both the Island and the mainland. Between 1969 and 1973, 51,000 students came from Puerto Rico to the New York City schools, and another 63,000 traveled in the other direction. About 30 percent reported between one and four changes in school between grades seven and nine.

In either direction, migration involves the difficulty of coordinating an educational program based on the requirements and offerings of two distinct school systems. While efforts have been made by the Puerto Rican Department of Education and The College Board to coordinate mainland and Island school procedures, a continued loss of student records coupled with frequent mid-

Project CAUSA: Intensive Training for Young Scientists

Project CAUSA (Comprehensive Activities to Upgrade Science and Academics) is a university-based science and mathematics enrichment program for talented students in grades 9 to 12 in Puerto Rico. The 300 students who participate annually in the Saturday program, Summer Institute, and summer mathematics and science camps are provided special science and mathematics curricula, materials and laboratory experiences, as well as the opportunity to participate in research at local universities, to be tutored in English, and receive guidance in preparing for college and for careers in science or engineering. Project CAUSA has also established a training program for high school science teachers, and works closely with the parents of its student participants. Since its founding in 1985, Project CAUSA has sent 100 percent of its graduates to college, with 85 percent majoring in science and engineering. Said one young girl who is a participant in the program: "Project CAUSA helped bring out the little scientist that was within me. I'd like to be a NASA astronaut, and with the help of Project CAUSA, I know I will make it."

semester transfers result in many Puerto Rican students losing academic ground.

ISSUES THAT MUST BE ADDRESSED

- Language barriers are of immense importance, both for Island-born Puerto Ricans who must struggle with English, and for mainland-born youngsters who cannot speak Spanish.
- Puerto Rican students on the mainland are clearly harmed psychologically, when compared to their Island peers, from the lack of visible Puerto Rican role models and leaders and the low status of Puerto Ricans on the mainland.
- Frequent transition of students between Island and mainland schools requires better coordination to prevent loss of records and the grade retention of students.
- It is important to avoid placing Puerto Rican students and faculty into a general category called "Hispanic." While Puerto Ricans and other Latinos share a common Spanish heritage, the differences in culture, language, and traditions are great.
- Despite the presence of role models, curricula, and language that are familiar and comfortable for students, and the absence of racial prejudice, dropout rates in Puerto Rico remain high. Clearly, such positive conditions are necessary but not sufficient for minority educational achievement.

> "Increasingly, the circular migration of Puerto Ricans between the Island and a growing number of states has meant that more and more Puerto Rican children will suffer the double penalty of attending two systems of public education whose insufficiencies and inadequacies are only further compounded by their incompatibilities."
>
> —Frank Bonilla and Richard Campos in *A Wealth of Poor: Puerto Ricans and the New Economic Order*

WHY WE ARE BEHIND

TEN MYTHS ABOUT THE EDUCATION OF MINORITY AMERICANS

Many barriers stand between our youth and a quality education. Among the most difficult of these obstacles are the perspectives—myths—that together shape the public's understanding of our situation, what is at stake, and what can be accomplished.

Myth #1: Learning is due to innate abilities and minorities are simply less capable of educational excellence than Whites.

Comment: As distasteful as this attitude is, it cannot be ignored. Although outright racists are for the most part outside the mainstream, more subtle attitudes of this kind are not uncommon at work and in school. Studies controlling for environmental factors repeatedly demonstrate that there is no basis in fact for the myth that minorities are less capable than Whites. Environmental factors in the lives of minority and poor children are the most significant elements in their lack of school success. When the combined effects of poverty and discrimination are added to the effects of second-rate schools, the achievement records of minorities are understandable, but not acceptable.

Myth #2: The situation is hopeless; the problems minority youth face, including poverty, teenage pregnancy, unemployment, drug abuse, and high dropout rates, are so overwhelming that society is incapable of providing effective responses.

Comment: The educational status of most minority students is discouraging. We seem to have made only spotty progress and in some critical areas, such as enrollment of high school graduates in higher education, we are losing ground. Promised greater educational opportunity in the 1960s, we have inherited the worst schools with the fewest resources.

The great danger of pessimism is that it is debilitating. At best, it creates a triage mentality that turns its back on "problem students" to focus on students with obvious promise. But such a narrow response is fundamentally wrong;

cutting losses is not a sound basis for developing America's human resources. That approach not only ignores the importance of education as a powerful impetus for a free and prosperous society, it also neglects outstanding achievements at all levels of public education. Many highly successful programs take children from the most difficult circumstances and set them on the road to accomplishment.

Myth #3: Quality education for all is a luxury, since not all jobs presently require creativity and problem solving skills.

Comment: America can either compete with a low-wage labor force whose productivity is limited by its educational underdevelopment, or it can compete with well-trained workers capable of learning, flexibility, and innovation. There is abundant evidence that educational requirements for future jobs will increase; this is especially true for jobs that pay high enough wages to make it possible for parents to support themselves and their families at acceptable levels. Moreover, the country's needs cannot be met by an "elite" few. America's quality of life depends heavily upon the education of its people. It is neither just nor economically sound to leave minority youth unprepared for their responsibilities as citizens or members of the workforce.

Myth #4: Education is an expense and not an investment.

Comment: Of the approximately one million American young people who drop out of school each year, most are marginally literate and virtually unemployable. The Committee for Economic Development reports that each year's class of dropouts costs the nation about $240 billion in crime, welfare, health care, and services. For every $1.00 spent on education, it costs $9.00 to provide services to dropouts. About 80 percent of all prison inmates, for example, are school dropouts. Each inmate costs the nation about $28,000 a year.

Education for American youth pays off in the short term through a stronger economy and reduced public spending. It pays over the long term as well. By the year 2030, for example, the over-65 population will have doubled. But the number of workers supporting each retiree will have dropped from a level of seventeen in 1952 to fewer than two at the turn of the century. Young people who will be supporting the nation's retirees in the 21st century must be productive workers.

Myth #5: Equity and excellence in education are in conflict.

Comment: This kind of thinking parallels the conventional wisdom that once existed in American manufacturing, which created a false choice between high quality and low costs. Quality, the experts said, could only be achieved by weeding out the defects. But American manufacturers have begun learning from the Japanese, who have shown decisively that striving for quality reduces costs with a simple strategy: *design quality into the manufacturing process itself,* which is much less expensive because it eliminates the need to repeat work. The same is true of the relationship between equity and excellence in education. They are not fundamentally incompatible. A system that provides equal educational opportunity is more likely to achieve higher levels of excellence because it focuses on uncovering more potential in the early stages of education instead of correcting defects later. It also broadens the knowledge base of *all* by including everyone in the teaching and learning process. This is critically important for a multiethnic, multicultural society.

Myth #6: All we need are marginal changes.

Comment: In years past, the American education system was well suited to training most workers to function in an economy in which all that all they needed was "the basics." For more than 100 years, this system has been unfair to minorities, and perpetuating that condition is both self-defeating and morally unacceptable. Our society cannot thrive in the 21st century with an educational system devised to meet the needs of the 19th. Marginal changes are insufficient; rigid school systems can neutralize marginal changes. Just as the requirements of flexibility, quality, and productivity demand a radical restructuring to create a growing economy, so too must our schools reject the status quo if they are to produce individuals with the creativity and problem-solving skills the nation needs.

Myth #7: Minorities don't care about education.

Comment: For centuries, minorities have fought for educational systems responsive to the needs of our children, and we have found it necessary to establish our own schools and colleges. We have demanded an end to *de jure* and *de facto* segregation, argued for tribal control of local schools, and called for culturally responsive curricula. Minority parents have long understood, above all, that education is the path to freedom and opportunity. Minority parents, however, are justifiably frustrated by an educational system that has been unresponsive to the needs of our children. Nevertheless, a recent poll revealed that persistently poor parents want their children to have access to educational opportunities. Fifty-nine percent of those surveyed rated staying in school as the most important factor for their children to have a better life, followed by job training (58 percent) and going to college (55 percent).

Myth #8: Bilingual education delays the learning of English and hinders academic achievement. A corollary myth contends that students whose first language is English do not need to become proficient in a second language (a "foreign" language) nor achieve multicultural literacy.

Comment: The increasing globalization of the economy and social experience strongly mandates that all Americans be able to communicate with those in

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Resource Centers for Science and Engineering: A National Model

Through the Resource Centers for Science and Engineering Program, the National Science Foundation established Regional Centers in Georgia, New Mexico, Puerto Rico, and New York, respectively. Each center is located at a university that has a substantial minority population and is designed to strengthen opportunities for minority students and faculty to pursue studies and careers in science and engineering. Common components at most centers include a pre-college program that offers Saturday science academies for elementary and middle school students, summer science institutes for high school students, and pre- and in-service science training for teachers; a regional program that gives area college faculty and students research opportunities not available on their campuses; and a university component, which provides opportunities for the university at which the center is located to strengthen and expand its science and engineering programs. The success of the Resource Center concept and its comprehensive approach have been recognized by leading science education experts who recommend the expansion of this model to other regions of the country with substantial minority populations.

other nations. It is imperative that all of us gain fluency in at least one other language. An educated American needs to be defined as an individual with strong basic skills, a broad set of advanced thinking skills, and fluency in a second language.

Recent English-Only and English Language Amendment efforts (already adopted in more than 14 states and various municipalities) run counter to the development of an educated nation and foster unnecessary divisiveness in a pluralistic society. We should aim to build on the strengths of that pluralism.

We support national and local efforts aimed at fostering second-language learning for all—or English Plus. As Senator Paul Simon has so ably argued in addressing the problem of the "tongue-tied American," the English Plus effort holds that "national interests can be best served when all members of our society have full access to effective opportunities to acquire English language proficiency plus mastery of a second language or multiple languages."

Myth #9: The problem will go away.

Comment: There is an inextricable connection between the need to educate our children for the demands of the global economy and to prevent the continued erosion of America's economic place in the world. Equally as clear is the certain decline of a society that is busy building more prisons to harbor those it fails to educate.

Myth #10: Educational success or failure is within the complete control of each individual and in America anybody can make it.

Comment: In a recent study, the NAACP Legal Defense and Education Fund found that 80 percent of the Black high school graduates in Mississippi, the state with the highest percentage of Black public school enrollment in the nation, had not taken the core high school curriculum that would prepare them for college admission. Similarly, the National Council of La Raza reports that 75 percent of the nation's Hispanic high school seniors have not taken courses that prepare them to enter college. Donald Stewart, President of the College Board, addressed this myth very well: "The idea that a child who is simply smart or able or hard working will somehow get accepted to and complete college is a myth. Race, economic background, and financial ability now stand between a student and a college degree." Hard work needs to be supplemented by a supportive learning environment and resources.

OTHER OBSTACLES TO A QUALITY EDUCATION

A minefield of other obstacles stands between our children and the education they need. Many of these obstacles can be eliminated by expanding or replicating existing successful intervention models; others can be solved by creating new programs. All will require a different set of national goals, expectations, and attitudes.

Obstacles In School

Low expectations: Students must not only hear that "all children can learn," they must feel that they are truly valued and that they can achieve academic success. This includes the valuing of their culture and language and the appreciation of their individual talents, essential ingredients for heightened self-esteem.

Tracking: In the first few days of school, judgments are made about children in the classroom. Some children, it is decided, are advanced, some are average, and some are behind, and so the grouping and tracking begin. In most school systems in our nation, this decision effectively seals the child's fate, sometimes for life. Students classified as slow almost never catch up and school rapidly becomes a forum for failure, not an arena for success. By the time these children are in middle schools, tracking intensifies and options begin to close.

Minority children are more likely to be placed in non-academic tracks because they do not fit the stereotypical, middle-class images our present educational system holds up as ideal (such as fluency in English, highly educated parents, and supportive out-of-school experiences). What many need is an enriched program to compensate for the lack of these assets.

Inadequate School Financing: Even in states with extensive tax equalization programs to offset weak community tax bases, schools serving large numbers of our students often have the fewest resources, the most crowded classrooms, and the lowest per-pupil expenditure ratios. It will require greater than average resources to provide students in such schools with a quality education. Improving equity in financing—at the intradistrict level as well as on an interdistrict basis—is a necessary but insufficient condition to provide quality education for many minority youth.

Too Few Minority Teachers: For generations, public school teaching attracted the best minority graduates of our colleges and universities. With the advent of the civil rights movement, career opportunities for minorities have expanded significantly. Greater opportunities have opened for women who in the past comprised the predominant portion of the teaching workforce. As a result of these expanding opportunities for both women and minorities, there is a growing scarcity of high-quality teacher candidates. Other factors affecting this shortage include the present low pay and status of the teaching profession and the institution of new and controversial teacher competency examinations.

Over the next decade, when the minority student population in schools will exceed the present 30 percent and will approach 50 percent in most urban areas, minority teachers are expected to decline from the current 10 percent of the overall teacher workforce (see Table 5) to just 5 percent. Fewer than 8 percent of the students in teacher preparation programs are minority, and this pool is likely to be cut in half by the candidates' subsequent failure to pass teacher competency tests required for licensing in most states. To achieve parity between the teaching force and the student population would require the licensing and certification of 450,000 minority teachers among the 1.5 million teachers needed for our schools during the next five years. Of the 700,000 new teachers who are expected to be trained in this period, only about 35,000 are estimated to be minority.

TABLE 5
MINORITY STUDENTS AND TEACHERS IN PUBLIC SCHOOLS
1987
(percent)

	Minority Public School Students	**Minority Public School Teachers**
Hispanic	9.1	1.9
American Indian/Alaskan Native	0.9	0.6
Black	16.2	6.9
Asian/Pacific Islanders	2.5	0.9

Source: American Association of Colleges for Teacher Education

Overreliance on Testing: The debate on testing leaves many questions unanswered, but three points seem clear:

(1) In keeping with the present path of educational reform, the number of standardized tests that students must take, from pre-kindergarten to graduate school, has greatly increased.

From 1985 to 1987, for example, the number of states requiring students to pass a standardized test for high school graduation rose from 15 to 24. Requirements for readiness tests for entry into kindergarten or first grade, grade promotion examinations, rising junior examinations (taken by college sophomores before entry into the junior year), and teacher competency examinations have increased in the 1980s. The National Center for Fair and Open Testing reports that testing requirements are most common in the South and in the largest urban areas where high concentrations of minority students are found.

(2) While many minority students score in the very highest rankings of all tests, the average scores for minority students are almost always below the average scores for Whites.

Explanations given for this gap include the following: some standardized tests contain questions that are culturally biased, using language or references that are unfamiliar to students from low-income and minority backgrounds; minority students attend the lowest-quality schools, and therefore are not as well prepared for examinations; and minority students are less likely to have access to the growing number of courses and computer software available to affluent youngsters both in and out of school help prepare them for standardized tests. Whatever the explanation, the impact of the differential is undeniable.

(3) Failure to provide remedies for unsuccessful test performance bars the door to opportunity for many students.

Several examples illustrate this point: more than 25 percent of the 1989 high school seniors in Louisiana failed the state's new high school graduation examination, and less than half of the money needed for remedial classes to help those students was available; a study of the impact of teacher competency testing indicates that 38,000 minority teachers were kept out of the teaching ranks by these tests in the mid-1980s and no opportunities for continuing education were readily available; and Florida's rising junior tests permitted 83 percent of all students who took the test in 1986 to continue with their higher education. The state is considering imposing higher score requirements, which, if applied to the 1986 test-takers, would have allowed only 44 percent of students overall and just 18 percent of Black students and 33 percent of Hispanic students to stay in school.

Whether intentional or not, standardized tests have the effect of weeding out minority children. Further, the growing pressure on teachers to raise test scores often results in "teaching to the test," so that what students learn in class matches what will be on the standardized test at the expense of interactive, problem-solving, and hands-on experiences. Finally, such tests are often used inappropriately: SAT and ACT test scores are sometimes used as the primary measure of student readiness for college, and scores on newly developed examinations have been used as the sole criterion for eligibility for teacher training programs. We need better ways to measure the potential of our students, not to root out those who test poorly for whatever reason, but to identify their strengths and weaknesses, and develop learning programs to help them.

Poorly Prepared Teachers: The poor condition of most of our children's schools should make them candidates for the very best teachers, but the opposite happens. One California study showed that teachers in predominantly minority schools were the least experienced, held the most emergency credentials, and were likely to be teaching out of their fields.

Disregard of Language and Cultural Diversity: The de-valuing of a student's first language and culture all too often results in the completely inappropriate placing of bright children in classes for the learning disabled or in remedial learning groups.

OBSTACLES OUT OF SCHOOL

What happens—or more often does not happen—inside the school is often reinforced by the home and community environments to which our children return when the school day is over.

Poverty and hopelessness: High levels of poverty, especially in female-headed households, and unacceptable levels of unemployment create significant obstacles in striving for high academic achievement. In some families, youth feel obliged to leave school to support their parents or siblings. The devastation of some urban families by economic dislocation, substance abuse, welfare regulations, and other causes has created terrible hardships for young children. The increasing polarization of the nation on the basis of income has been a major cause of the increasing levels of racial and ethnic segregation in communities and the schools in those communities. Visions of limited opportunity and options must be overcome by the creation of clear and concrete examples that education can make a difference, as well as by economic and social policies to combat poverty and unemployment.

Absence of Educational Legacy: Low-income parents typically have less formal education and often find it difficult or impossible to help their children navigate through school. They are less likely to challenge the system on behalf of their children, and less able to provide a home environment that supports learning. Studies have indicated that youth from such families lose more ground academically during the summer months than do their more economically privileged counterparts.

Children left to care for themselves after school, often referred to as "latchkey" children, are twice as likely to use tobacco, alcohol, and marijuana, according to a study conducted by the University of Southern California.

Negative Peer Pressure: During the critical adolescent years when basic values are being formed, peer pressure plays a significant role in whether youth strive to achieve in school. For example, some studies show that many Black youngsters who value education are rejected by their peers as "acting White." Because acceptance is so hard to find, its only measure for a young girl often becomes the ability to have a baby, and for a young boy is represented by membership in a gang.

All of these obstacles and the myths with which they are intertwined can be overcome. Overcoming them requires a plan grounded in concrete goals, reinforced with practical proven strategies based on what we know can work, and supported with the commitment of the entire society. That plan must begin with the imperative to radically restructure schools to give teachers and principals more resources, flexibility, and responsibility for student achievement.

EDUCATION THAT WORKS: RESTRUCTURING AMERICAN SCHOOLS

Policymakers, educators, and other leaders are beginning to understand what is needed to correct these problems and to provide the United States with the educational system we need to compete in the world economy.

Of primary importance is strong leadership to make Americans aware of the gravity of the problem and to galvanize public support for the concerted, long-term actions required to address it. There are literally hundreds of successful grassroots programs to improve quality education for all Americans, including the education of our children. What is lacking is the leadership to create a sense of national urgency and to focus adequate resources on developing these local models into national strategies that work for all.

The nation's education crisis is an opportunity to secure the national future for all children. It is not insurmountable. Effective leaders view it as a problem to be solved, not one to be tolerated.

Effective leaders also recognize that the skills of all children, including those of our children, cannot be developed without radical restructuring of our schools. What must be done depends first and foremost on making the educational achievement of all students the highest priority of the schools—the benchmark against which all of the system's participants are judged and rewarded. The main focus of restructured schools must therefore be student achievement, rather than ease of administration, average daily attendance, SAT scores, teachers' salaries, expenditures per pupil, or any of the other indicators that have traditionally been used to judge schools.

Since measurable results will drive the learning system, considerable research and demonstration work will be required to perfect better indicators of student achievements. We believe that these measures should not be one-dimensional—they should attempt to assess students' multiple intelligences and achievements, and do so with a variety of assessment techniques beyond standardized test scores.

The most important part of any plan to improve education for everybody—Whites as well as minorities—must be to radically restructure America's schools. Restructuring can create *systems* that could incorporate the lessons learned from the grassroots efforts to improve minority education all over the country. Restructuring also is necessary to demonstrate to the American people that the increased public investments needed to dramatically improve our schools will in fact be translated into higher educational achievement for students.

UNDERSTANDING SCHOOL RESTRUCTURING

Because of its importance for all students, especially our students, and because it means different things to different people, we want to state clearly what we mean by "restructuring" and why it is important for us.

Restructuring means making fundamental changes in the rules, roles, and relationships in schools. A restructured school would make student achievement the main criterion against which teachers, principals, and administrators are judged and rewarded. A restructured system would decentralize decisions about how to improve learning, increasing the involvement of teachers and principals in policy discussions. Policymakers would establish basic outcome objectives but would leave decisions about how to achieve those objectives to teachers, principals, parents, child development professionals, and other interested parties at the school and community levels. In addition to outcomes prescribed by elected officials and policymakers, restructured schools would be guided by professional standards based on knowledge and skills developed through research and experience.

As discussed in the Carnegie Task Force on Teaching as a Profession's *A Nation Prepared*, restructuring depends heavily on highly qualified professional teachers and administrators who are held accountable for student achievement but who have the knowledge, skills, and flexibility to diagnose individual learning needs and prescribe learning procedures.

RESTRUCTURING: IMPORTANCE FOR MINORITIES

No process is more important to providing quality education for our students than school restructuring. Minority concerns were largely ignored in the early reforms of the 1980s, resulting in negative outcomes for minority teachers and students.

Restructuring is important to us for a number of additional reasons:

- Although the traditional factory school model does not serve very many students well, it has been particularly damaging to the disadvantaged—minorities and White—whose home backgrounds have not prepared them as well as their more advantaged peers to function in an impersonal, bureaucratic school system.
- The factory model has repelled many able teachers, but the rate of decline has been much greater for nonWhites than for Whites. The model's negative features include stultifying, even degrading, working environments; low pay and professional status; and poor outcomes for most students. Restructuring promises to attract more and better teachers by creating a more professional environment, higher rewards for teachers, and better outcomes for students.
- Minorities would benefit greatly from restructured learning systems that genuinely value students by demonstrating sensitivity to their backgrounds, language, values, and ways of viewing the world and by assuming responsibility for their learning.

Restructuring in Rochester

"The problem with today's schools is not that they are no longer as good as they once were. The problem with today's schools is that they are precisely what they always were—while the world around them has changed so significantly.

Schools must be restructured as centers of inquiry and reflection—not of unexamined tradition. We must emphasize critical thinking skills and cooperative learning. . . We must question even the most hallowed practices and assumptions: that children learn best in 47-minute segments, sitting passively in rows; that norm-referenced multiple-choice tests are the best indices of student learning; that teaching is telling, learning is accumulating, and knowledge is facts.

School-based planning may be the most important and promising agreement in the new contract with the Rochester School Board. A shared governance process for decision-making at the school level, it empowers all major stake-holders: parents, teachers, administrators, and, in high schools, students."

Adam. Urbanski, "The Rochester Contract: A Status Report, *Educational Leadership*, November, 1988

- Restructuring would result in fundamental systemic changes that would give schools and teachers greater flexibility and incentives to incorporate the lessons of hundreds of local *ad hoc* programs into their systems. We have found numerous individual success stories, but no exemplary school systems. Restructuring would make it possible to have successful systems.

WHY IS SCHOOL RESTRUCTURING NEEDED?

Restructuring is needed for a very basic reason: the traditional hierarchical factory model is obsolete and unsustainable. It is obsolete because it was designed to meet the standardized basic skills requirements of an agricultural-industrial world. The system still does an adequate job of turning out students who are literate. But it does not turn out very many graduates with the higher-order thinking skills required in a world-class economy, skills such as the ability to solve complex problems, analyze abstract knowledge, communicate with precision, deal with change and ambiguity, or work well with other people.

Factory model schools teach students to memorize through drill and practice rather than through the use of knowledge and skills to solve problems, innovate, and learn. The factory model treats students as objects to be acted on rather than as active participants in their own learning. The factory model assumes that teachers need not have higher-order thinking skills because they, like factory workers, only need to follow the rules imposed from above. Above all, the factory model ignores individual differences by assuming that there is one best way to learn and teach. It assumes that management's responsibility is to understand what is best for the system and impose it through bureaucracies on teachers and students.

Any incentive system is based on the assumption that an organization will get what it measures and rewards. The factory model measures everything and rewards nothing. As David Kearns, chairman of Xerox, has observed: "In the American school system if you are very good nothing good happens to you, and if you are bad nothing bad happens to you." The system actually encourages mediocrity. Worse, many of the system's incentives are genuinely perverse. Allocating money to schools for labeling children as learning disabled, or allocating funds on the basis of average daily attendance for a few days at the beginning of the school year encourages such labeling and provides no incentive to prevent dropouts. The factory model assumes as true what is known to be false, namely that intelligence and achievement are standardized and therefore measurable by objective tests.

The restructured model relies more heavily on participative processes at the point of learning. Accountability in the factory school means observing the rules and regulations; accountability in the restructured school means improving students' knowledge, skills, and behavior. The new school we seek will recognize differences in individual experiences, knowledge, learning, and teaching styles. A restructured school system would give professional educators the flexibility to develop pedagogical approaches to adapt to diverse circumstances and individual students. A restructured model would stress the importance of incentives related to changes in student achievement and behavior.

The restructured model assumes complex, multiple intelligences and achievements that must be assessed through observation and performance. The

Restructuring Principles

"Education, like private industry, can improve by restructuring operations following some very simple principles.

First, go for quality and build it in the first time whenever possible.

Second, reward success in producing quality.

Third, when a system for real accountability is in place, let the people on the firing line figure out how to get the job done, and get rid of as much bureaucracy and as many intervening rules and regulations as possible."

To Secure Our Future, National Center on Education and the Economy, 1989

Restructuring and At-Risk Students

Kenneth B. Clark and other national leaders in their report to the Charles Stewart Mott Foundation recommended:

"That the commissioners or superintendents of education of each state develop recommendations for the state board and the legislature on ways to facilitate the restructuring of the schools to better meet the needs of at-risk youth, and that the legislatures provide incentives to local districts to carry out restructuring measures that will benefit the neediest students in the district."

America's Shame, America's Hope, 1988

restructured model also assumes that there is no one best way to teach or learn; professional educators who can adapt research and experience-based knowledge to particular situations are essential. The restructured model stresses an experimental rather than a doctrinaire approach to learning problems, and accepts that developing new approaches requires risks.

A more participative system requires fewer monitors and bosses, but it requires more technical assistance, in-service training, and logistical support. The traditional bureaucracies should therefore be transformed to provide more of these supportive services.

The truth is that the factory school model cannot be sustained. First, we are unlikely to have the resources, especially the highly qualified teachers, even to sustain present student-teacher ratios. Second, even if we could make the resources available, the outcomes of the factory system are grossly inadequate for the needs of a more dynamic and competitive world. We spend more on education relative to Gross National Product than most other countries, but student achievement, especially in mathematics and science, is below that of our major competitors and even below that of some developing countries. Our dropout rate is about three times as great as that of our principal competitors. We cannot improve outcomes by enlarging an inefficient system.

How would a restructured system differ from the school reforms of the early 1980s or the choice proposals advocated by some and being tried in a number of places?

The reforms of the early 1980s were not restructuring: they were based on the assumption that all we needed to do was to return to "the basics" and tighten up the system by more rules and regulations imposed from above and by more standardized tests for teachers and students. These reforms merely supported the factory system's weaknesses. Indeed, since these measures apparently assumed a surplus of qualified teachers, they accelerated the flight from teaching for all, including minority teachers, by imposing more onerous barriers that had dubious validity as predictors of teacher qualifications. As the National Board for Professional Teaching Standards emphasizes, assessing teaching is a complex process vital to restructuring, but unlikely to be achieved by standardized tests alone.

RESTRUCTURING AND CHOICE

Some proponents of greater choice in the selection of schools for parents and students believe that choice alone will cause schools to be restructured. We believe this to be unlikely because this proposal puts the cart before the horse. Schools must be restructured before students can have a choice. Choice could be part of a restructuring process, but choice alone is unlikely to do much to cause restructuring. Choice systems are even more expensive than the factory model, mainly because of high transportation, information, and administration costs. Choice is unlikely to provide sufficient incentives for schools to restructure. In particular, there are likely to be few incentives for parents to move their children from wealthy to poorer school districts. Choice advocates assume, moreover, that schools have the resources and flexibility to restructure. However, the experience in Minnesota, the first statewide choice system, suggests that demographic, economic, and political realities might deny schools the

Germany's Comprehensive Schools

"First, our teachers do not work as isolated individuals. . . They are part of a team of six to eight teachers. Together this team is responsible for the teaching and education of three groups of twenty-seven to thirty students.

Second . . . our teachers are responsible not merely for teaching their subjects but for the total education of their students, for making sure that their students succeed, personally and academically.

Third, the teacher teams and their students stay together for six years, from the time the students enter the school in fifth grade until they earn their leaving certificate at the end of grade ten.

Fourth, our teachers make all the instructional decisions, including how curriculum will be taught, and all sorts of other decisions as well . . . [The] class schedule, determining who will teach what and when, whether certain classes are best taught in a single period or a longer bloc of time . . . instigate in-service training . . . call social workers when that seems necessary. . .

Fifth, our students are not forced to compete against each other . . . we try to give support to our students. When they first enter the school, they are assigned to a table group of five to six students, integrated by sex, ability, and ethnic origin. Inside these groups, the children tutor and encourage each other."

"Creating a School Community . . . An Interview with Anne Ratzki," *American Educator*, Spring, 1988 necessary resources to restructure even when school authorities are strongly motivated to do so. Once a system's resources start eroding, choice could cause a flight from the schools and the schools might have no way to halt the process.

Choice systems compound adverse consequences for minorities from low-income families if they cause a flight by more affluent people from the districts where they are concentrated or limit options of students with limited English proficiency or students perceived as having a deficiency. Choice is likely to be exercised mainly by higher-income parents who have the time and resources to acquire the necessary information to make choices among schools. Systems should be restructured, therefore, to make every school a school of choice.

THE COMER MODEL

The social and cultural discontinuity between traditional schools and our children tends to produce alienation and failure. Instead of attempting to understand this social discontinuity, teachers and administrators often blame minority children and their parents for the students' inability to meet the schools' behavioral or academic expectations. Unable to achieve in school, our children begin to see academic success as unattainable, and so they protect themselves by deciding school is unimportant. Many seek a sense of adequacy, belonging, and self-affirmation in non-mainstream groups that do not value academic achievement.

One of the best examples of how restructuring can improve student performance is suggested by James Comer's work in New Haven, Connecticut. Beginning in 1968, Comer and his colleagues at the Yale Child Study Center developed a model that greatly improved the performance of two schools with the lowest achievement and worst attendance records of New Haven's 33 schools. The combined enrollment of these two schools was 99 percent Black; 70 percent of the children's families were welfare recipients.

Fifteen years later, the socio-economic makeup of the schools was unchanged but the academic performance of the two schools had surpassed the national average, they ranked third and fifth in the city in composite fourth grade test scores, and both had superior attendance records. Comer reported in 1988 that there had been no serious behavior problem in either school for more than a decade.

A follow-up study tracked 24 students through three years in a Comer school and compared them with a control group who spent the same period in another New Haven school. The Comer school students were more than a year ahead in reading and mathematics. The success of the New Haven schools caused Comer's model to be adopted in more than 50 schools around the country by 1988.

What accounted for these achievements? Comer's answer seems simple: these schools paid attention to child development and established a basic participatory school management system in which the principals shared power with parents, teachers, and professional support staff. To a very significant degree, Comer's success came about because he created processes and structures that changed attitudes, incentive structures, and behavior. One of the most important attitudinal changes was to convince teachers, parents and school administrators and the students themselves, that with proper attitudes and hard work these students could learn as much as anybody.

Comer and his colleagues adapted child development and behavioral science research to the New Haven schools. This research demonstrates that children whose family and social development match the school's mainstream values can adjust to the school's requirements much better than children from poor families, who are less likely to have the social skills needed to cope with that environment. The mismatch between home and school environments impedes learning. Comer explains:

> . . . lack of development or development that is at odds with the mainstream occurs disproportionately often among children from minority groups that have had the most traumatic experiences in this society: Native Americans, Hispanics, and Blacks. The religious, political, economic, and social institutions that had organized and stabilized their communities have suffered severe discontinuity and destruction. Furthermore, these groups have been excluded from educational, economic, and political opportunity.

Realizing that change had to come from within the school and could not be mandated from outside as the factory model assumes, Comer and his colleagues organized a governance and management team in each school, led by the principal and made up of elected parents and teachers, mental health specialists, and representatives from the nonprofessional support staff. These teams recognized the authority of the principals, but the principals could not make decisions without considering the concerns of other members of the team.

The teams also decided to concentrate on problem-solving, not blame-fixing, and to make decisions by consensus rather than by formal votes. This consensus process gave each member a sense of participation and ownership of the decisions and avoided the tendency to polarize members between "winners" and "losers." Consensus-building eased communications between parents and school staff, facilitated joint discussions to solve students' problems, and gave teachers and principals expert professional help in dealing with student behavior problems they were not trained to address. This consensus mechanism had the added advantage of giving the schools the flexibility to correct problems and improve the system as it evolved.

This self-correcting developmental process made it possible to establish the School Development Program, as Comer's model has come to be called, and to discover that the key ingredients for success were the governance team, the mental health group, and parental involvement. Most important, "With each intervention the [school] staff became increasingly sensitive to the concerns of developing children and to the fact that behavior problems result mainly from unmet needs rather than from willful badness—and that actions can be taken to meet these needs."

SCHOOL-LINKED SERVICES

The needs of students also can be served by school-linked comprehensive social welfare, health, and other delivery systems. Under present administrative arrangements, the delivery of health and counseling services is based on the bureaucratic assumption that there is one best way to deliver services to clients. These systems are too often more concerned about professional boundaries and values and the ease of delivering services than in effectively meeting human needs. These bureaucratic structures are grossly inadequate for the complex problems confronting today's young people, especially minority students.

School-linked comprehensive service systems can overcome these problems, more effectively meet needs, and thereby improve student achievement. These school-linked systems take a variety of forms, but to be effective they seem to require several basic features, including shared governance among the schools and various service delivery systems, a flexible menu of services, collaborative funding, and reducing referrals to service agencies in order to concentrate on developing sustained relationships with students and their families. This model provides the flexibility for staffs to move across agency lines in order to meet their clients' needs.

With few exceptions, school-linked service delivery systems have been developed too recently to permit the kind of review afforded by Comer's School Development Program. However, the anecdotal evidence with respect to the impact of these systems on academic achievement, delinquent behavior, and the prevention of problem behaviors is generally positive.

OTHER RESTRUCTURING ACTIVITIES

Where is restructuring going on? There are hundreds of examples of restructuring in local schools, but only a few in school districts and states. Some schools, like those in New Haven, have been restructured, but we have found no restructured school districts, though several are in the early stages of this process. Overall, probably no more than 1 to 2 percent of the nation's schools are involved in some kind of restructuring, but a number of models are emerging. Among the most widely publicized of these are in Dade County, Florida and Rochester, New York. These efforts were partly due to the demonstrated failures of the traditional models, partly due to a perception that the early school reforms to strengthen the factory model were counterproductive, and partly to the publication of *A Nation Prepared.*

The Miami-Dade model, which began with 33 schools (of 279) in the 1987-88 school year and expanded to more than 80 by 1989, is a joint effort between the union and the school board. This project solicits proposals from, and enters into contracts with, schools; it encourages school-based management, shared decision making, professional teacher development, and an experimental approach.

Other restructuring projects being tried around the country include (1) several school-based management projects sponsored by the National Education Association in 37 districts in 17 states; (2) the Coalition of Essential Schools in over 50 districts using the basic principles set forth in Theodore Sizer's *Horace's Compromise*, which stress flexibility for teachers to teach and students to learn in their own ways, concentrating on essential subjects and learning by doing; and (3) a project jointly sponsored by the Education Commission of the States and the Coalition for Essential Schools to reexamine the policy and regulation structures in five states (Arkansas, Delaware, Illinois, New Mexico, and Rhode Island).

How Will Restructuring Spread?

Such an effort must establish clear goals for the achievement of all students, reward success in meeting those goals, and give teachers and principals the utmost flexibility to respond to classroom and building-level conditions in the most creative ways. Beyond these essential features, no template can be imposed on local restructuring; the best way to encourage it lies in accelerating demonstrations and experiments already underway, understanding that time and patience will be required as we learn more about what works best under which conditions. Above all, we must be prepared to accept the inevitable failures along with the successes and be prepared to learn from each. As patterns emerge, they can be emulated and incorporated into a much more diverse, decentralized educational system that promises to be far more responsive to the diverse population of the United States than the standardized mass production model now in place.

THE ACTION PLAN

The success of this Action Plan requires that it be carried out in partnerships between a variety of agencies: federal, state, and local governments, the private sector, and local communities. Most importantly, minority and nonminority Americans must work together. The Plan is therefore written using the collective voices of all Americans.

GUIDELINES

The Action Plan we propose proceeds from guidelines to recommended strategies. That is, we believe certain overarching values must connect minority children, schools, and communities to the nation's common future. The guidelines below offer a renewed vision of America in which all children, minority and nonminority, can participate.

Intervene early. Whatever intervention steps are taken, they must begin early. Early intervention in nutrition, parent education, day care, and pre-school education is essential; it has lasting impact and is cost-effective.

Restructure the entire educational system. We believe that the education of minority youth requires that the nation's entire educational enterprise be restructured to accomplish the following objectives: (1) promote rather than discourage the education of minority students, (2) prepare these students to make the transition from the schools to higher education or the world of work, and (3) help them succeed, whichever option they choose. The achievement of these objectives will require that America's schools be radically transformed.

Create an environment for success. Prepare minority children for academic success and expect them to achieve it. Schools and colleges must be recognized and rewarded for their success in educating minority children and youth. Every child is entitled to at least one adult who believes in his or her potential and helps the child reach that potential.

Support what works. Numerous programs exist in local districts that have successfully solved difficult problems for minority youth. Other programs along the pipeline work and should be expanded.

Respect and value the culture of the child in school. The educational system must respect the diversity of all students, including those from "different"

"One half of what a human being learns from birth to 17 is learned before the age of four. Thus [the education] of the child begins in the home with the parent. For any child, the first and most important teacher is his/her principal caretaker—his/her parent. Many parents simply don't know how to go about teaching their children, or feel that they can make a difference, having failed within the system themselves. By understanding and accepting the roles as primary teachers of their children in a very active way, parents have higher aspiration levels and a new sense of hopefulness. They are motivated to change the course of events for themselves and the destiny of their children."

Mercédes Peréz de Colón, AVANCE, QEM Project Hearings, San Antonio, April, 1988 cultural and language backgrounds. Schools must also make use of pedagogical strategies that have proved most effective with minority students, and apply such techniques more broadly.

Strengthen existing bonds and forge new linkages among all elements of the education system that serve minority students. This should occur between homes and schools, between pre-schools and kindergartens, between middle and senior high schools, between schools and adult education, schools and colleges, between two- and four-year institutions, and between undergraduate and graduate institutions. We must not continue to tolerate gaps in the system for too much talent is being lost.

Create nontraditional and life-long learning opportunities for minority youth. The "summer loss" phenomenon aggravates the academic achievement problems of low-income students. In fact, some have estimated that as much as 80 percent of the difference between advantaged and disadvantaged children in learning occurs during the summer. We must provide more after-school, summer, and apprenticeship opportunities; provide opportunities for continual reentry into the educational system; and create new models that encourage school professionals to deal effectively with students' physical and emotional needs, both at school and at home.

Create incentives that will make the best teachers available to those who need them the most. We can no longer tolerate a situation in which the least experienced educators are assigned to schools where the students need the best teaching, while the best-prepared serve in predominantly middle-class communities. We must put in place incentives that remedy this situation.

Coordinate existing intervention programs by strengthening the bonds between the schools and other service delivery systems in low-income communities through implementation of school-based services. Health care, literacy programs, day care, employment training, and other social services for children and their families continue to operate in relative isolation from the schools. Traditionally, schools are involved in children's lives about six hours a day, nine months a year. Yet, many minority children and their families face problems at home that impede the educational achievement of the children and the employability of their parents. Community schools must serve to coordinate the social, health, and vocational services that children and families need. One approach is to view campuses as community schools, open not just from 8 to 3, but also in the late afternoon for children of working parents and in the evenings for parent education and community events. Many successful projects such as Harlem's Public School 208 demonstrate that schools can become community centers that improve educational opportunities for children and families from low-income communities.

Revitalize the traditional faith in minority communities and families in the power of education to advance minority children. Community institutions and informal networks that once served as safety nets for urban children have weakened considerably over the last two decades. Minority leaders must work to rebuild these networks, particularly in the schools, and especially in those areas devastated by poverty, substance abuse, and crime. A declining faith in

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"We need to rethink and challenge the basic assumptions on how we address the educational needs of minority students in higher education and in elementary and secondary schools, or we will all continue in the same rut. We can't change unless we begin to have a different vision, and a different process and goal of what we plan to do. [T]he challenge is one of developing educational policy that addresses the issue of equity, and needs of an increasingly diverse population."

Max Castillo, President, San Antonio College, QEM Project Hearings, San Antonio, April, 1988

Mathematics and Science in the Community

To improve mathematics and science skills among minority youth, the Linkages Project of the American Association for the Advancement of Science has developed programs with numerous community-based organizations. One project involves coordinating the educational outreach efforts of 380 Black churches to students from preschool to high school. Another recent project is the development of Community Computer Centers, a network of 38 nonprofit organizations established with the assistance of the Apple Computer Company. At each center, computer learning programs in mathematics are targeted at youth in middle schools.

education as a pathway to advancement has critically undermined efforts for positive change. The one sure way to increase the value of education in the eyes of minority children is to show that it works and that education can reap rewards commensurate with effort and performance. Minority youth need greater exposure to role models who have persisted in school, have launched successful careers, and have seen their incomes rise steadily. They must know that education has been the foundation of the expansion of the minority middle class since the 1960s.

In particular, we must ensure that positive values are modeled for children. Children in poverty are easy victims of those who urge them to live for the present and ignore the value of education as a sustaining power for their lives.

VISION

Based on these guidelines, we envision a nation moving forward on democratic principles of opportunity and access. Minorities will contribute as decision-makers and leaders at all levels of society, and will be counted among the best lawyers, business executives, elected officials, school principals, university presidents, scientists, and engineers. Today's minority children will be productive members of tomorrow's society. All citizens will prosper from the growing skills of the American workforce, able to adapt to and improve upon the rapid changes in technology in the workplace.

These changes will occur because all minority children will have had access to a quality education throughout their lives. By the time they graduate from high school, they will be well-grounded in biology, chemistry, physics, mathematics, and English; they will be fluent in English and at least one other language; and they will have strong writing, analytical, problem-solving, and computer skills.

Educational achievements will be due in no small part to improvements in schools, as well as to their access to an array of after-school and weekend programs. But perhaps most important to their success will be the increased value placed by parents on learning and achievement. Access to a quality education will foster a love of learning in families and will help pave the way for academic success.

Students entering higher education will have developed skill and comfort in taking tests that are used for diagnostic purposes. During their pre-college years, they will have had repeated experiences with new methods of testing that not only assess their knowledge and understanding of specific academic concepts, but also evaluate their writing and reasoning skills, their leadership and entrepreneurial promise, and their other special talents.

These college students will be secure in the knowledge and appreciation of their own heritage, which they will have acquired both at home and in the classroom. They will be confident of their ability to contribute to academic discussions, and they will not hesitate to ask questions of their professors. Their self-esteem will be high and evident through the leadership positions they hold in student organizations and in their living groups. As in high school, they will receive their education from well-trained and enthusiastic minority and nonminority teachers who have high expectations of all students and who are

Investing in LA's Best

Despite evidence that unsupervised children are vulnerable to drugs and gangs, few cities have marshalled the resources needed to offer quality after-school services to low-income youth. In Los Angeles, with an estimated 100,000 children left on their own after school each day, a partnership between the public and private sectors now brings needed after-school care to elementary school students in Los Angeles.

LA's Best—Better Educated Students for Tomorrow—provides 3,000 students at 15 elementary schools with education, enrichment, recreation, nutrition, and self-esteem programs after regular school hours.

Participating schools offer after-school services from 2:00 until 6:00 p.m., accommodating the needs of low-income working parents while boosting the academic and social development of students. Enrichment activities include a homework lab providing tutoring, a library program in reading and computer skills, and science, music, art, and theater programs. Students also enjoy recreational activities. LA's Best programs are staffed by professionals with the aid of volunteers, including older students and community members.

What is unusual about the program is the source of public funds: a $2 million grant from the Community Redevelopment Agency, using funds generated from commercial development. Public funds have been supplemented by private contributions.

supportive of their career aspirations in science, literature, the arts, and in education. These students will find living and learning environments that are supportive and friendly, and a climate in which racist, sexist, and other disparaging attitudes are not tolerated.

One of the most important aspects of this learning environment is that it will avoid early tracking and other practices that ultimately limit the intellectual choices available to minorities at a very early age. A world-class school system keeps the options open for students at every stage in the learning cycle.

These students of the future will find it difficult to imagine the world of prejudice, crime, and violence their parents and grandparents feared they might inherit. Their futures will be bright, for they will be disciplined, hard-working, and eager to learn. They will feel confident that they will be judged on the quality of their work—and not on their skin color or background.

This vision can be real if America acts. It will not be easy to attain, but it is within reach. It must stem from an equitable and accessible educational system and from the improved social and economic policies resulting from a better educated populace. It must build upon successful programs already in place, upon other initiatives already on the drawing board, and upon ideas not yet imagined. But most essential, it requires a strong consensus within minority and nonminority communities that quality education for minorities is critical to America's continuing prosperity and international leadership.

"There are shockingly few minority faculty in this country to serve as models for both minority and majority students."

Bernard Harleston, President, City College of NY, QEM Project Hearings, New York, February, 1988

RECOMMENDED STRATEGIES FOR ACHIEVING QUALITY EDUCATION FOR MINORITIES

By the year 2000, we believe it is possible to have in place an educational system that will deliver quality education to minority youth. Such a system can be achieved if we act now, if we reallocate some existing resources as well as invest new money now, and if we coalesce around a set of national goals for the education of minorities now.

Fundamental to bringing about the changes we advocate are the total restructuring of schools and the marshalling of energy and resources of various organizations, agencies, and communities toward the provision of quality education for minorities.

Within the framework of restructured schools, we present a set of six national goals and strategies for achieving each of them, and we provide summary descriptions of the roles of various institutions and individuals in carrying out these strategies and bringing about lasting change. We end with estimates of costs for implementing various strategies recommended in our Plan.

GOAL 1

Ensure that minority students start school prepared to learn.

ACCOMPLISHING GOAL 1:
RECOMMENDED STRATEGIES FOR PRE-SCHOOL YEARS

- **Increase participation in the Women, Infants, and Children (WIC) Program so that by 1995 all the eligible participants are provided support.**

- **Double the participation in child nutrition programs.**
- **Increase federal and state funding for child care programs to cover a 100 percent participation rate of pre-schoolers with mothers on welfare or for working mothers whose income is 150 percent of the poverty line.**
- **Increase enrollment in Head Start incrementally over the next five years to cover 100 percent of the eligible population by 1995.**
- **Invest in new approaches to easing and strengthening the home-to-school transition.**

DISCUSSION: PRE-SCHOOL YEARS

The gap that produces fewer minority graduates from high schools, colleges, and graduate schools often begins before birth, with poorly nourished mothers who lack medical care. Some pre-school children do not receive the attention and stimulation they need as a foundation for intellectual curiosity and development. The Special Supplemental Food Program for Women, Infants and Children (WIC), a federal program that addresses this problem, costs only $118 for each full-weight baby born at term, but currently reaches only half of those eligible.

Compelling evidence indicates that youngsters with the benefit of comprehensive pre-school services are much more likely than their peers to persist through high school graduation. Detailed studies of the Early Training Project, the Perry Pre-school Project, and other programs show that children enrolled in quality pre-school programs are more likely to complete high school, attend college, and hold a job, and are less likely to be on public assistance.

However, poor children are less likely to be enrolled in such programs: in 1986, according to the Children's Defense Fund, fewer than 40 percent of four-year-olds from families with incomes below $10,000 annually were enrolled in pre-school, while two-thirds of four-year-olds from families with incomes above $35,000 were in pre-school. Head Start is a federal program that provides such pre-school opportunities to three- and four-year-old low-income children. Despite the national consensus on the importance of Head Start, current funding is only adequate to support about one-third of the children eligible for its services. We seem to lack the national will to do what is clearly in the children's or the country's best interest.

Of critical importance is the involvement of parents in the education of their children and the assurance that the interests of children are central to the school's agenda. To help secure a smooth home-to-school transition, and to provide on-site advocates for the interests of children, we endorse the recommendation of the National Association of State Boards of Education for a "restructured approach to schooling" for four- to eight-year olds (pre-K to grade 2). We support their call for the creation of special units within schools to serve these children and their parents. These units would ensure that practices and activities in school are appropriate for young children and would actively work with parents during these critical years in their children's development.

GOAL 2

Ensure that the academic achievement of minority youth is at a level that will enable them, upon graduation from high school, to enter the workforce or college fully prepared to be successful and not in need of remediation.

ACCOMPLISHING GOAL 2:
RECOMMENDED STRATEGIES FOR THE ELEMENTARY SCHOOL YEARS

- **Eliminate ability grouping and age-grading in the elementary grades.**
- **Establish elementary core competencies, including computer literacy.**
- **Increase funding of Chapter I programs so that by 1995 all eligible children are covered.**
- **Provide access to quality health education by the third grade.**
- **Actively promote and support the learning of at least two languages by each child.**
- **Enlist the cooperation of the media, particularly commercial television and its advertisers, in efforts to ensure that after school programming is educational and intellectually stimulating.**
- **Extend the school day and year to minimize summer loss and maximize exposure to mathematics and science.**

DISCUSSION: ELEMENTARY SCHOOL YEARS

Many alert and curious minority youngsters arrive in kindergarten eager to learn, yet are channelled into school structures that sap their curiosity and numb their minds. By third grade, they begin to fall behind and may be at a grave disadvantage educationally before they leave elementary school.

Eliminate ability grouping and age-grading in the elementary grades. The decision about how to track a new student rarely takes more than a week; the damage lasts a lifetime. School boards should require principals and teachers to address differential rates of preparation for learning by such techniques as flexible pacing and cooperative learning, not by segregating students according to the artificial criteria of preconceived expectations and often suspect tests. Equally important, we believe that restructured elementary schools should start from the proposition that age-grading is entirely inappropriate in the early years of schooling. We are convinced that student progress should be governed by skill-grading, a system under which student mastery of specific skills, or combination of skills, would permit them to advance. This approach lends itself particularly well to cooperative learning and team teaching.

Establish elementary core competencies. Every state should develop criteria for core competencies for all elementary school children in basic skills (reading, computing, and communicating) and higher-order cognitive skills (analysis, synthesis, evaluation, and problem framing). The state should mandate that local boards incorporate these criteria into grade school curriculum development, promotion standards, and school evaluations.

Increase funding of Chapter I programs so that by 1995 all eligible children are covered. Programs established under Chapter I of the Elementary and Secondary Education Act, which provides federal funding to schools with large numbers of low-income and minority students, repeatedly have demonstrated effectiveness in raising achievement levels of such youngsters. Gains in reading and mathematics of up to 12 months in the 8-month school year are common. Unfortunately, only about 40 percent of children eligible for Chapter I services now receive them, and funding is rarely sufficient at the local level to provide summer enrichment programming to cover the period when many minority youngsters lose the ground they gain during the regular school year. We endorse the proposals of the National Center on Education and the Economy to allow greater flexibility in the use of Chapter I funds by schools, including the strong caveat that such flexibility must be accompanied by standards of accountability based upon the performance of minority students.

Provide access to quality health education by the third grade. Minority youth in particular need early and realistic health education because of the health risks often found in urban or low-income areas. Health education in the elementary years should focus on regular exercise, basic safety, basic nutrition and hygiene, and on introducing children to the dangers of drug and alcohol abuse.

Actively promote and support the learning of at least two languages by each child. Foreign languages should be introduced to English-speaking children as early as the third grade, and we believe that every child should be proficient in at least two languages. In schools with students from more than one language background, bilingual parents and community members should be used as teachers' assistants.

Enlist the cooperation of the media, particularly commercial television and its advertisers, in efforts to ensure that after-school programming is educational and intellectually stimulating. During the two-hour slot after school (3:00 to 5:00 p.m.), stations should be strongly urged to air such programs as *Reading Rainbow, Sesame Street, 3-2-1 Contact,* and *Square One* to reinforce and supplement classroom instruction as well as provide a much needed alternative to unsupervised play. Stations might also use that time period for televised homework assistance or foreign language study.

Extend the school day and year to minimize summer loss and maximize exposure to mathematics and science. The evidence seems clear that many minority youth begin to fall behind by the third or fourth grade due to the cumulative effect of low expectations, inadequate preparation at home, language or cultural differences, and, most notably, summer learning losses. We propose an 11-month school year for all children, but especially minority children, at least every three years, to enable students to stay on grade level and pursue their learning interests. We further recommend that a longer school day of at least 1.5 hours be available to provide reinforcing experiences to students and to ease the burden on working parents and single-parent families. After the completion of "regular" classes, we must make supervised and enriching activities available to minority youth, staffed through the use of parents, community and business organizations,

The Higher Education Information Center

"Higher education is within your reach." That is the message of the Higher Education Information Center, helping young people in Massachusetts overcome the information barrier that so often stands between them and their college dreams.

Many urban youngsters lack access to the knowledge they need about what courses they must take to be prepared for college, what they must do to apply and be admitted to college, or even what their college options might be.

Visitors to the Center have access to counselors, as well as college videos and computerized college databases. Students receive help in selecting colleges and careers, and get assistance in identifying sources of financial aid and filling out forms. Staff have developed the Boston Youth Outreach and Statewide Youth Educational Awareness programs. The Center also sponsors a toll-free telephone hotline providing career, educational, and financial aid information.

and business organizations, and volunteers, and also through the use of minority paraprofessionals trained by schools and patterned after the experience of the Head Start Program in employing low-income mothers as aides. Reduced summer vacation plans and lack of air conditioning should not be allowed to stand in the way of an extended school year nor should unfounded worries about "more of the same" prevent providing enriching hands-on experiences and extra-curricular activities through an extended day.

ACCOMPLISHING GOAL 2:
RECOMMENDED STRATEGIES FOR THE MIDDLE YEARS

- **Create small learning communities.**
- **Staff middle schools with teachers and administrators who are experts in adolescent development.**
- **Reengage families and the community with the middle schools in the education of young adolescents.**
- **Stimulate and nourish positive values.**
- **Implement the science curriculum reforms recommended by the National Science Teachers Association and The Human Biology Project beginning at least by grade 7, as well as the recommendations of Project 2061 and the curriculum standards in mathematics advocated by the National Council of Teachers of Mathematics for K–12.**
- **Make college and career options known to children beginning in the middle school years.**
- **Extend the Talent Search component of the TRIO Programs to the middle years.**
- **Promote schools-within-schools, career academies, and alternative preparatory academies.**

DISCUSSION: THE MIDDLE YEARS

We must create middle schools that allow 12-to-15 year-olds to use the period of adolescence as a staging area for intellectual and social maturation. As the Carnegie Council for Adolescent Development made clear in its report, *Turning Points,* the long-neglected middle school years are of immense importance to all youth, but especially so to minority youngsters. In the smaller, restructured schools recommended by the Council, minority students would have the opportunity to establish key relationships with teachers and other adults who can help the youngsters foster belief in their own potential as well as in the value of education itself. Of particular importance to minority youth are recommendations regarding restructuring, staffing, and family participation in schools.

Create small learning communities. It is essential to create learning environments that encourage intellectual growth and personal maturation in an atmosphere of respect for peers and adults. Schools-within-schools, teacher-student "families" bound together through several grades, cooperative learning, peer tutoring, and the elimination of tracking all provide a structure of stability necessary to adolescents.

Staff middle schools with teachers and administrators who are experts in adolescent

development. Middle school students are not taller versions of elementary children or shorter versions of high school students. They are a distinct population with their own characteristics and needs. We urge the National Board for Professional Teaching Standards to develop a national model for teacher certification in the middle schools. Such a model can serve as a guide to strengthen the preparation of middle school teachers and hold out middle school teaching as a professional specialization, focusing the attention of the entire educational community on the importance of these crucial years for development and pedagogy.

Reengage families and the community with the middle schools in the education of young adolescents. We urge health care professionals, the private sector, and community organizations to strengthen their engagement with the middle schools to reduce life-threatening and unhealthy behavior, to offer out-of-school learning opportunities, and to support the learning process at home. In particular, we believe that parental support efforts such as those offered by the Quality Education Project in California offer promising avenues for increasing parental involvement with their children's education. In this program, parents agree, through written contracts, to see that their children arrive to school on time properly clothed and fed, to set aside a specific space in the home where homework is done each day, and to monitor their children's progress in school.

Stimulate and nourish positive values. Every middle school student should learn, both in regular courses and in special programs, to resolve differences without resorting to violence, to respect the rights of others, to work together in groups, and to value oneself. Too many students live under circumstances where violence is the main method used to resolve differences, gangs are the major support groups, and pregnancy is seen as the way to get affection.

Implement the science curriculum reform recommended by the National Science Teachers Association (NSTA), and the Human Biology Project, beginning in grade 7, as well as the recommendations of Project 2061 and the curriculum standards in mathematics recommended by the National Council of Teachers of Mathematics (NCTM) for grades K–12. The NSTA reforms, the Human Biology Project, and Project 2061 all involve a new approach to the teaching of science. Rather than the traditional sequence of courses, all taught in isolation from each other and from the immediate experience of students, these curricula now in development attempt to integrate science fields with each other and with the world familiar to the student. Through an integrated approach, through hands-on experiments and experiences, and by making an explicit connection between science and familiar events, such as the physical changes associated with puberty, these curricula better enable students to understand and use scientific principles. This is especially important for minority students, who are less likely to have access to role models in science or out-of-school science experiences, and are more likely to be tracked out of traditional science courses. The reforms proposed by NSTA would extend the teaching of Biology, Chemistry, Physics, and Earth/Space Science across grades 7–12, with emphasis spanning from descriptive and phenomenological, to empirical and semiquantitative, to theoretical and abstract. Among the many changes in the NCTM reforms of mathematics would be a major shift in emphasis away from rote

Parents Making a Difference

To motivate Black children to aim for college, the most convincing proponents can be family members and friends. Integrating parents into the process is the key to the Saturday Academy at the University of California at Irvine. Established in 1985, the Saturday Academy takes Orange County children and gives them supplemental coaching using faculty from UC Irvine. The unique aspect? Parents must attend half the sessions.

The California Quality Education Project, funded by private foundations, adopts a similar strategy. With 100,000 students in 16 districts, QEP asks parents to pledge they will set aside study time at home, get their children to school on time, read to children every day, attend back-to-school nights, and attend parent-teacher conferences.

—QEM Project Hearings,
Los Angeles, June, 1988

toward active problem solving by students, the understanding of underlying concepts, the use of tools such as calculators and computers, and the application of mathematical disciplines to real life situations.

Make college and career options known to children beginning in the middle schools. Students and their families need information about college or careers before students enter high school. Without extensive educational experience it is difficult for families to understand not only the range of college or career options open to children but, in addition, how to prepare for those options. Few counselors have training in pre-college issues, even at the high school level, and less so in the middle school years, and yet course decisions made as early as the 8th grade can have a permanent effect on the child's college and career prospects. This is further aggravated when there is a language gap between the counselor and the student; school districts must increase the number of bilingual and culturally sensitive counselors. We urge new linkages between middle schools and colleges, expanding upon the work already initiated by The College Board, the National Association of College Admissions Counselors, and others, to offer college counseling that helps 8th and 9th graders keep their options open. Where possible, neighboring colleges should set up offices at school sites to ensure that students are aware of college entrance requirements. Similarly, we urge that local private industry councils and business groups develop career counseling programs for the middle schools that help orient students and teachers to the academic skills needed in the job market.

Extend the Talent Search component of the TRIO Programs into the middle schools. The objective of the Talent Search is to identify, encourage, and help able students and their families become aware of educational opportunities at the postsecondary level. Talent Search's track record of placing 75–85 percent of its high school seniors into postsecondary education demonstrates its effectiveness. By intervening even earlier, many students can be reached who otherwise may drop out before reaching senior high school or who may not select appropriate courses to enable them to attend college.

Promote schools-within-schools, career academies, and alternative preparatory academies. The concept of school as a special "place" is fundamental to what is known as the "effective schools" movement, but too often special schools are limited to magnet schools that serve only a small number of gifted youngsters. Ultimately, every child should have the opportunity to attend a school that has a special sense of place, or mission. In the meantime, we recommend that every school develop a smaller academy program, with the goal of making the special program available to all students. These should not be special academic tracks—we do not believe in tracks. Rather, our vision is based on the school-within-a-school concept pioneered so successfully by the Coalition for Essential Schools and the career academies that are in place in California and other states. Such smaller units promote student pride and participation, but also family and community involvement in schools. Career academies, in which students get work experience as well as coursework that draws upon a particular vocation, such as communications, computers, or teaching, help provide the kind of "real-world" experiences students need to better appreciate the education they are receiving.

Central Park School:
Small is Beautiful

Central Park School is located in New York City's East Harlem. It is based on the alternative education philosophy of Theodore Sizer which calls for a smaller school size to allow for greater personal contact between teacher and student. The school was initiated in 1974 by Deborah Meier, the current principal, and is affiliated with the Coalition of Essential Schools.

The school's aim is to "give teachers time to get to know each student and time to tailor the instructional program for each individual." Teachers collectively make decisions on the students' standards of performance and style of pedagogy. Teachers also develop the curriculum for the entire school.

Parental involvement is a key component. Parents are involved in a variety of areas including school operation, curriculum development, and special projects. Community service is required of students. In 1987, the student population was comprised of 25 percent White and Asian students, 30 percent Hispanic, and 45 percent Black students. The dropout rate in the Central Park School was 3.1 percent in 1987, which contrasts to the more than 70 percent rate for Hispanics and Blacks city-wide.

These schools-within-schools are part of a larger continuum of special programs that give students learning experiences outside, and in addition to, the traditional classroom structure. We also recommend that colleges and schools collaborate to provide Saturday academies and summer programs that provide hands-on science, mathematics, and culturally reinforcing experiences. These are the experiences, supplemental to what takes place in most schools, that can excite a love of learning and a sense of a one's potential and how it can be expressed through academics.

Further along that continuum is another kind of academy—public or private preparatory academies at the pre-college level. These academies, which were in place in the Black community before *Brown v. Board of Education*, could provide access to high-quality education in an environment where academic excellence is expected of all students, where the cultural heritage and language of all children are cherished and integrated into the entire curriculum, where students can be safe and secure, and where low-income and minority youth can pursue intellectual pursuits in the same way that their more affluent peers now do at preparatory schools. While the primary focus for reform should reside in the public schools, and while we do not argue that such academies are appropriate for all minority youth, we do believe that such schools should be available to students of all talents and abilities as one alternative to the present school system.

ACCOMPLISHING GOAL 2: RECOMMENDED STRATEGIES FOR THE HIGH SCHOOL YEARS

- **Replace the general track curriculum in high school with a core academic curriculum that will prepare students for college or the workplace.**
- **Develop clear expectations for student learning.**
- **Require participation in community service programs for high school graduation.**
- **Institute peer and cross-age tutoring programs.**
- **Provide on-site health services and strengthen health education.**
- **Focus on life skills.**
- **Increase the number and quality of counselors, including bilingual counselors, available to students in predominantly minority schools.**

DISCUSSION: THE HIGH SCHOOL YEARS

Replace the general track curriculum in high school with a core academic curriculum to prepare students for college or the workplace. To keep students' options open, every middle school student should arrive in high school having taken algebra. On a larger scale we strongly support the development of a core academic curriculum for middle and senior high school students that prepares all students for college or a meaningful career. To ensure that minority youth find their own voice and culture represented in the curricula, the local communities must be closely involved in the development of whatever courses are adopted for a particular school. Working together, representatives of the local community, business, higher education, and ethnic organizations in each area

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West Philadelphia Improvement Corps

The West Philadelphia Improvement Corps (WEPIC) is a "school-based neighborhood and school revitalization movement" conceptualized at the University of Pennsylvania and involving West Philadelphia public schools. The program began in 1985 and currently involves six public schools and more than four hundred children. The program's aim is to integrate the research, teaching, and service mission of the university with the educational, social and economic needs of the community.

WEPIC began as a summer program involving children from William Cullen Bryant Elementary School and concentrated on painting a mural, planting trees, and cleaning up the area. Since then the program has grown to include junior high and high school students and has become a year-round program. Its activities involve school children, parents, and community members in landscaping, housing rehabilitation, construction work, work with the elderly, computer workshops, and many other community projects.

Recent activities include the opening of one of the schools for 18 hours, seven days a week; and establishment of a day care center.

The WEPIC approach is currently being expanded throughout Philadelphia and the Delaware Valley.

or district can develop guidelines with teachers and administrators to ensure that what youth are taught not only prepares them for work and college, but also to be proud members of their own community. These requirements must be revisited periodically to adjust to changes in college admissions requirements as well as the needs of the labor market.

Develop clear expectations for student learning. Public schools should develop with and disseminate to students and families a set of clear expectations for student performance each year. These expectations should take the form of unambiguous academic, behavioral, and extra-curricular goals, focusing on learning, school citizenship, and participation in the life of the total school community.

Require participation in community service programs for high school graduation. Community service programs, such as those found in the Atlanta school district and the Central Park East district in New York City, help students establish important and lasting links with their communities, provide them with a stake in the success of community institutions, and provide community leaders with a stake in the success of the schools.

Institute peer and cross-age tutoring programs. When college students tutor high school students, and high school students tutor not only each other but students younger than themselves, benefits accrue not only to the learner, but to the teacher as well. The tutors learn the material more completely, of course, but they also learn about their own abilities as teachers and as members of a larger community. They serve as role models and, in turn, find their own self-esteem bolstered. Every high school should establish peer and cross-age tutoring programs with nearby colleges and middle and elementary schools.

Provide on-site health services and strengthen health education. There are no easy responses to the drug and alcohol problems affecting many youth today, nor are there simple ways to slow down the occurrence of teenage pregnancy. What we do know is that there are several effective strategies that can help. These begin with education in school on drugs and sexual behavior. A surprising number of children simply do not have adequate information on the implications of sexual behavior or contraception, for example, or on the effect of drugs upon their bodies. Nor do they have adequate information about nutrition. Communities cannot assume that families are able to impart this kind of knowledge. Second, successful strategies must provide children with real economic alternatives to the drug trade and emotional alternatives to pregnancy. Other strategies, such as the declaration of "drug-free zones" around schools may have promise, but little evidence is in place to judge their effectiveness. More generally, to fulfill their academic mission effectively, schools must address the human service needs of students. The widespread implementation of school-linked services has demonstrated the positive impact that such efforts can have on academic achievement.

Focus on life skills. Secondary schools should provide training in "life skills" such as formulating good work habits, interaction with public agencies, job hunting, appropriate dress and behavior for the workplace, how to work in a team, how to complete applications and follow instructions, and how to look

Valued Youth Helping Each Other

The Valued Youth Partnership is a comprehensive peer-tutoring project conducted in San Antonio, Texas by the Intercultural Development Research Association (IDRA). The project employs three concurrent strategies: cross-age tutoring, structural learning experiences through small group course work, and the utilization of successful minority adult role models.

The project was implemented in five school districts in San Antonio between 1984 and 1988. The program uses as tutors 525 low-income, Hispanic middle and high school students who were at a high risk of dropping out. They tutored 1,575 elementary students.

The results have shown a decline in the rate of absenteeism and disciplinary action referrals, and an improvement in self-concept. In school districts with over 40 percent dropout rates, dropouts of high-risk students declined to an average of 2.5 percent during those four years. In 1989, the dropout rate among the tutors fell to zero.

for meaningful employment where growth and development are possible. Many of these skills, as well as useful career experience, can be gained through apprenticeship programs, described later.

Increase the number and quality of counselors, including bilingual counselors, available to students in predominantly minority schools. The availability of trained school counselors is critically important to the academic success of minority students, and the education reforms recommended in this Plan and by others will make the counseling role even more important in the future. Yet minority students are least likely to receive good—and sometimes any—counseling and are most vulnerable to its absence.

Affluent students can rely upon the educational experiences of their parents, older siblings, or relatives to help steer them through the complex options available to them in high school and the increasingly long-term decisions required to take advantage of college or career opportunities. They are ready to make the course selections in middle school that will determine their college eligibility; they are aware of the college admissions process and are ready for standardized tests, applications, and interviews; they have access to information about financial aid; and they likely have visited colleges or already have attachments to the colleges their parents attended. Minority students are much less likely to have family resources available to help guide them through these decisions, or even to make them aware of these decisions.

The College Board's Commission on Pre-college Guidance and Counseling found in 1986 that in urban school districts as many as 700 students were assigned to each counselor. Not only are these counselors overwhelmed by the number of students they must serve, they are frequently hampered by a virtual absence of formal training in pre-college issues. A survey of counselor education programs by the National Association of College Admissions Counselors found that only 4 in 125 college programs offered courses in pre-college guidance, and two of these courses were offered only in the summer.

While there is no simple formula for determining the number of counselors that should be available for students, a guideline in this area seems clear: we must equalize distribution of counselors and counseling resources so that the counselor to student ratio in predominantly minority urban schools is at least equal to, if not greater than, the ratio in more affluent suburban schools. Counselors not only can offer college services but can be an invaluable help to students having to cope with family problems, peer pressure to use drugs and join gangs, and neighborhood violence.

GOAL 3

Significantly increase the participation of minority students in higher education with a special emphasis on the study of mathematics, science, and engineering.

ACCOMPLISHING GOAL 3:
RECOMMENDED STRATEGIES FOR HIGHER EDUCATION

- **Revise federal student aid formulas to increase the proportion of grants to loans.**

Linking up with Colleges

Despite progress, a major challenge for educators remains convincing minority students to consider college as an option. The Comprehensive Mathematics and Science Program (CMSP) at Columbia University, in operation for 13 years, has proven that the private sector, working with high schools, can vastly improve minority prospects.

Serving 3,500 mostly Black and Hispanic students in six New York City high schools and three high schools in Fulton County, Georgia, the program randomly selects ninth graders to participate in CMSP. There are no special selection criteria. The students are linked through an enrichment program with college professors and high school teachers, and a major goal is to ensure that they have access to the mathematics and science courses needed as college prerequisites.

According to Gil Lopez, director of the program, participants perform much better on the New York Regents examination than non-participants. More important, participants are 50 percent more likely to finish high school.

—QEM Project Hearings, New York, February, 1988

- **Offer a six-week summer science residential program for at least 50 minority high school juniors on each college and university campus.**
- **Increase support for predominantly minority institutions that produce mathematics and science graduates.**
- **Expand the concept of affirmative action to include outreach efforts at the pre-college level.**
- **Intensify minority student recruitment.**
- **Improve the campus racial climate.**
- **Create minority enrollment incentives.**
- **Link salary and promotion decisions to effectiveness in facilitating the graduation of minority students.**
- **Improve minority faculty recruitment and retention.**
- **Clarify and enforce articulation agreements between community colleges and four-year colleges and universities.**
- **Actively support mathematics and science-based career choices by minority students.**
- **Encourage more minority students to take advanced placement examinations.**
- **Form institutional consortia.**
- **Involve the private sector.**
- **Modify institutional accreditation criteria to include an assessment of institutional climate for minority students.**
- **Offer optional 13th year programs on college campuses.**
- **Fund residential summer science academies through the National Science Foundation and the Department of Energy for students in grades 7–12.**

DISCUSSION: HIGHER EDUCATION

Revise federal student aid formulas. Federal officials must correct the imbalance that has developed in the last decade between grants and loans. Loan subsidies now consume over 50 percent of the total federal funds available for student financial assistance, some of it to the benefit of relatively affluent families. The growth of Pell Grants and Basic Educational Opportunity Grants is severely constrained by the pressure of the Guaranteed Student Loan Program. There is strong evidence that reduced student aid has been a factor in the declining college enrollment during the 1980s. A dollar cap should be placed on total federal expenditures for loan subsidies, allowing increases in student aid to be devoted to grant programs.

At the same time, student aid policy should direct grant funds to low-income and minority students in their first two years of a four-year institution, while reserving loan funds for the last two years. Such a policy would bring the costs of attendance at four-year institutions in the first two years into line with the generally lower costs of attending community colleges, and would encourage more minority students to consider pursuing baccalaureate and other advanced degrees.

Offer a six-week summer science residential program for at least 50 minority

high school juniors on each college and university campus. To allow high school students to experience life on a college campus and also to strengthen their backgrounds in mathematics, science, writing, and the humanities, every college should offer a summer program for a group of minority high school juniors. These students should be strongly encouraged to apply for admission at that college, with the host college or university offering scholarships to promising summer participants.

Increase support for predominantly minority institutions that produce mathematics and science graduates. The National Science Foundation should support predominantly minority institutions that have a track record of producing minority students in mathematics and science at the baccalaureate levels or minority students who successfully transfer to baccalaureate-granting institutions in these areas. Funds could be used for recruitment and development of minority faculty, outreach into local communities to nurture minority high school students interested in science, and scholarships and paid research opportunities for minority undergraduates.

Expand the concept of affirmative action to include outreach efforts at the pre-college level. The definition of "affirmative action" should be expanded to include outreach efforts to increase the pool of minority students prepared to enter college. Other efforts should include establishing formal mechanisms that will allow for intellectual interactions between college faculty and teachers in local predominantly minority schools. Such a mechanism might include an institutional presence at the school site, placing a college counselor there, offering minicourses for high school science and mathematics teachers, or undergraduate tutorial services available to high school students.

Intensify minority student recruitment. Every college should intensify its recruitment efforts in minority and low-income communities and consider creating, where necessary, summer transition programs to smooth the educational path of those minority youth who have been inadequately served by the educational process.

Improve the campus racial climate. Every college and university in the country should firmly address issues of race relations on their campus. This might be done through courses on, for example, the History of Slavery and Reconstruction in the United States, as well as on topics of historical significance to Hispanics and American Indians. Whatever steps are taken, they must not be fragmented or shunted aside to minority-focused offices or studies. Teaching throughout the academy must be sensitive to minority concerns and achievements. Moreover, trustees, administrators, faculties, and student leaders must make it clear that racial intimidation has no place on campus. Institutions must establish well-defined grievance procedures, and must respond swiftly, fairly, and decisively to all allegations of racist behavior. The tone must be set by the president and chief academic officer; and faculty must have high expectations of minority students, and challenge, encourage, and motivate them as with nonminority students.

Create minority enrollment incentives. While we believe that most college and university faculty and administrators would follow these guidelines enthusiasti-

A Leg-up on Science

How can underrepresented minorities take their rightful place in the science and technical professions? The Mathematics Engineering Science Achievement (MESA) program is attempting to make it happen at 35 university campuses throughout California. With each site staffed by professional outreach officers, about 5,000 students are now enrolled in MESA's pre-college program; 2,800 are in its minority engineering program. MESA boasts a phenomenal success rate: About 90 percent of seniors enrolled in MESA go on to college, the vast majority to four-year institutions.

MESA's Richard Santee attributes the program's success to partnerships between people and institutions. First, MESA is structured so that teachers, engineering faculty, business people, and administrators share in the program's ownership and its achievements. Second, the state and industry are partners, with every dollar raised from private sources matched by two state dollars.

—QEM Project Hearings, Los Angeles, June, 1988 cally, we also believe that we must institute new incentives to encourage institutional as well as personal changes. To begin, state legislatures should devise funding formulas to reward institutions that are successful in enrolling and graduating minority students in proportions equal to or greater than the minority college-age population of the state.

Link salary and promotion decisions to effectiveness in facilitating the graduation of minority students. The present absence of incentives for faculty to promote the retention and graduation of minority students has contributed to the present problem. To reverse this situation, fundamental changes must be initiated to create the necessary incentives that will encourage minority and nonminority faculty to assume greater responsibility for the progress of minority students. Two key areas that have great potential are salary and promotion decisions. The careful linking of decisions in these two areas to the production of minority students (or other related outcomes) has great promise for increasing the pool of minority college graduates.

Improve minority faculty recruitment and retention. Collaborative arrangements involving majority and minority institutions should be created that will have as their goal the identification, nurturing, and graduation of talented minority undergraduates through the doctoral degree. Such efforts would be concrete ways of addressing the small pool of minority faculty, especially in science and engineering fields. New, comprehensive reward structures should be developed by colleges and universities to encourage the recruitment and retention of minority graduate students and faculty, with a view to increasing the number of positive role models for undergraduates.

Clarify and enforce articulation agreements. The largest untapped reservoir of potential college baccalaureates is in community colleges. Transfer rates, however, are low, and many of those who do transfer fail to graduate. Transfer agreements between community colleges and four-year institutions should be more clear-cut and binding, and created with a particular view to easing the transition of minority students between institutions. Each state must set numerical goals for minority transfer students and then provide financial incentives to two- and four-year institutions which meet these standards.

In addition, transfer centers at community colleges must be put in place. We recommend programs jointly funded by community college districts and regional consortia of four-year colleges and universities to help guide potential transfer students.

Actively promote mathematics and science careers. Preparation for baccalaureate degrees in mathematics and science should include active promotion by colleges and private sector sponsors of science fairs and competitions for high school achievement. Awards, scholarships, summer institutes, and part-time jobs should be made available to encourage minority students to pursue degrees in these fields.

Encourage participation in advanced placement examinations. Additional preparation can be achieved through active promotion of college advanced placement courses in mathematics and science at the high school level. The nationally

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Stand and Deliver: The Sequel

Two years ago, the nation became acquainted with mathematics teacher Jaime Escalante through the film, *Stand and Deliver,* which dramatized the success of Escalante and his colleagues at Garfield High School in Los Angeles since 1979 in coaching inner-city students to take the Advanced Placement calculus exam. The newest evidence of the success of Garfield's math and science program is a $457,000 grant from the National Science Foundation to allow about 560 predominantly Hispanic students to attend accelerated classes at East Los Angeles College and provide training for secondary and elementary teachers in Escalante's methods. The Escalante equation: "Determination + Discipline + Hard Work = Success." According to the Bolivian native, "Success is a victory. It is a big bonus to your community, to your school, and to your last name."

Although most of the students are from poor families in which neither parent has a high school diploma, about 140 students from Garfield High School, where Escalante teaches, took the Advanced Placement calculus test this year. That was a record for both the school and Los Angeles, but National Science Foundation Assistant Director Bassam Shakhashiri hopes that the Escalante program will provide a model for improving minority opportunities nationwide. "The East Los Angeles area is typical of fertile ground that must be cultivated if the United States is to continue at the forefront of science and technology," he says.

—*Engineering Times*, August, 1989
—*Washington Post*, June 25, 1989

recognized work done by Jaime Escalante at Garfield High School in Los Angeles with low-income Hispanic students is as encouraging as it is instructive.

Form institutional consortia. Because Black and Hispanic youth live predominantly in major urban areas—which are also rich in institutions of higher education—we encourage college and university consortia to pool their resources for counseling and transition programs as an additional way of ensuring the graduation from high school of minority students who can be successful at the baccalaureate level.

Involve the private sector. Private companies should provide the services of scientists, mathematicians, statisticians, and engineers, especially those who are minorities, to area colleges and universities as tutors, mentors, science project advisors, and faculty members. Local private laboratories can offer internships for high school students and for undergraduates as an inducement to potential majors in the physical and life sciences and mathematics. Modest stipends, tuition grants, and assistance with expenses can serve as additional inducements to low-income students pursuing degrees in these areas.

Modify institutional accreditation criteria. Accreditation criteria should be modified to encourage regional accreditation teams to pay at least as much attention to the number of and quality of life for minority students on campus as the number and quality of books in the library. Such criteria must include the provision of a supportive and affirming climate for minority students.

Offer optional 13th year programs on college campuses. Middle College High School in Long Island, New York, with a predominantly minority student body, is located on the campus of La Guardia Community College. Mission High School in San Francisco brings in faculty from California State University at San Francisco to teach college-credit classes for its predominantly Latino student body. In both cases, students who might otherwise have little or no contact with higher education find their horizons and options broadened by their exposure to the college environment, and are more likely to attend college. Drawing upon these models, we propose an optional 13th year of high school spent at a college campus, sponsored jointly by colleges and by school districts, which could serve as a powerful tool for increasing high school graduation rates while boosting the number of minority graduates who go on to college. The optional 13th year could serve as a transition period for students needing to boost their academic preparation before entering college full-time, benefitting the many minority youngsters who graduate from inferior high schools, ill-prepared to compete in college with peers of equal talent who benefitted from more rigorous pre-college training. The 13th year could serve the needs of older students who have fallen behind due to tracking, the need to work, or other concerns, and are embarrassed to be in school with students of a younger age. It could also serve as the academic component of an apprenticeship program, combining work and learning experiences. Ideally, students participating in the program would be eligible to attend the host college and would receive assistance in the admissions and financial aid process, as well as in test-taking.

Fund residential summer science academies for students in grades 7-12. The National Science Foundation and the Department of Energy should support

Calculus: A Critical Filter

U.C. Berkeley's Uri Treisman was baffled in 1979 by an inescapable fact about freshman calculus: while one minority group—Asians—routinely excelled, another group—Blacks—had the highest rate of failure. This remained true even for Blacks with high SAT scores and low-income Asian students.

To get at the reasons, Treisman began an 18-month examination of the study habits of Black and Chinese students in freshman mathematics. He discovered that none of the conventional explanations for failure—lower motivation, poor preparation, the disadvantage of poverty, unsupportive families—was borne out. But a striking pattern emerged. Black students whose self-reliance got them to college were virtually isolated, studying alone; Chinese students formed study groups to solve problems together.

Rejecting a remedial approach, Treisman formed the Mathematics Workshop. Black students in freshman calculus classes are organized into a study group, spending six hours a week working on problems Treisman constructs. A key factor: asking students to solve tough problems. The workshop's effectiveness is impressive. Failure rates have dropped from 60 to 4 percent; four times as many participants earn degrees in math-based fields as non-workshop Black students.

Variations of the workshop program has spread throughout the California system and to about 30 other universities. Treisman's principles: 1) help minority students excel; 2) emphasize collaboration and small groups; 3) obtain faculty sponsorship. His aim: To prepare students "to replace us someday."

—*Charles Dana Foundation Report*, Spring, 1988

—*American Educator*, Spring, 1988

the creation of summer residential science academies at institutions of higher education for students in grades 7–12 beginning with 50 seventh and eighth graders at each site in the first year, and expanding to 300 students in the steady state with 50 new seventh graders joining returning students each summer.

If we are to increase significantly the number of minority students receiving baccalaureate degrees in science and engineering, we must ensure that these students pursue an academic curriculum that includes the sequence of geometry-algebra-trigonometry and foundation courses in biology, chemistry, and physics. Here the knowledge base is inescapably cumulative. If minority children are to contribute to the nation's growth and success in these areas, special science-oriented initiatives must be attempted at the pre-college level as a prerequisite for increasing the number of science and engineering baccalaureates.

GOAL 4

Strengthen and increase the number of teachers of minority students.

ACCOMPLISHING GOAL 4: RECOMMENDED STRATEGIES FOR STRENGTHENING TEACHERS OF MINORITY STUDENTS

- **Provide incentives for the best teachers to be available to the students who need them the most.**
- **Pay educators to work 12 months, and have them use that time to prepare for and to deliver quality education to students.**
- **Support and expand the efforts of predominantly minority institutions to prepare teachers, including bilingual teachers.**
- **Develop more creative recruitment and outreach programs for prospective teachers.**
- **Support alternative paths into teaching from other professions.**
- **Create a National Merit Teaching Scholarship Program.**
- **Develop loan forgiveness programs for high-ability minority students to attract them to teaching.**
- **Establish a national Doctoral Opportunities Program.**

DISCUSSION: THE PRE-COLLEGE TEACHING WORKFORCE

A fundamental problem facing minority children is that they are disproportionately taught by the least experienced and least qualified teachers. Not only is action needed to attract better prepared students into teaching, steps are urgently needed to address the poor quality of many current teachers of minority students.

At the very time minority enrollments in public schools are skyrocketing, the number of minority teachers is on a downward spiral. In 1970, for example, 12 percent of the teaching force in our public schools was Black; by 1985 it was 8 percent, and most experts believe it will fall below 5 percent in the next decade.

While experts continue to argue the causes, a crisis is developing. Students, rarely seeing a minority teacher, may get the message that the authority, status, and accomplishment of learning are largely the province of Whites. And many nonminority students who will enter a society and workforce with a rising proportion of minorities will be denied the insight and knowledge they might have acquired from minority teachers. This would be an unfortunate lesson for nonminority and minority Americans alike. We must expand the pool of minority teachers.

Provide incentives for the best teachers to be available to the students who need them the most. The Council of Great City Schools in a recent study found that teacher shortages are four times higher in urban areas than in other areas of the country. Among the reasons teachers leave urban schools are substandard facilities, overstretched resources, students with profound needs, and numerous social problems outside the school. The Council recommends decent salaries, improved working conditions, professional respect and support, a collegial atmosphere, adequate resources, and a good principal as conditions necessary to attract and retain urban school teachers. In addition, we propose that districts establish a system of incentives that provide the greatest rewards—both financial and in terms of status and authority—to teachers who work in the lowest-achieving school districts. The emphasis would be on "value-added" performance, so that the best teachers, who can have the greatest and fastest impact on youth, would have the most incentive to work at the urban schools with the lowest-achieving students.

Mathematics and Science Education Network (MSEN)

The MSEN Pre-college Program in North Carolina has, as its primary goal, to increase the number of underrepresented minority students who pursue mathematics- or science-based fields of study at the university level by providing them with rigorous academic enrichment activities in the sixth through twelfth grades. Participating students have shown excellent gains in mathematics, language arts, and science. MSEN teacher training workshops offered over the past two years in mathematics, science, and communication skills have reached more than 200 teachers.

Pay educators to work 12 months, and have them use that additional time to prepare for and to deliver quality education to students. Presently, most teachers are far too overburdened with paperwork and other obligations to meet the vastly expanded needs of the restructured school. To meet with parents takes time, as does the training necessary to be effective. To learn Spanish to communicate with Puerto Rican or Mexican American youth is critical in many areas for White teachers, but many find it difficult to carve out time to master this new skill given competing demands. All teachers, regardless of race or ethnic background, need to work on multicultural curricula and pedagogy to be more effective. All of this requires training and, most importantly, time. But time is the most precious and least available resource for a teacher.

We believe that the answer to this problem stems from a new approach to the growing effort to recognize teaching as a profession. As teachers negotiate contracts to be paid as professionals, we believe that this obligation should extend not for nine months, as at present, but for 12 months, including vacation, as for other professionals. We also believe that this should be optional, as many teachers do pursue other interests in the summers; teachers should have the option of more financial compensation for a longer work year. We would hope that most if not all teachers will choose this option for, with this time, teachers can keep current in their fields and our youngsters will be better educated.

The summer period can be used for teaching, language training, multicultural curriculum development, workshops offered by other teachers, community work, parental education, or training for certification as a master teacher. Courses to help teachers gain confidence and comfort in mathematics and science can be offered. Teachers will be needed for the 11-month school years we propose, in the management of restructured schools, and in the development of career academies, cultural academies, and schools within schools. We encourage districts and states to begin this process on a pilot, voluntary basis, with funding provided by the states.

Support and expand the efforts of predominantly minority institutions to prepare teachers, including bilingual teachers. In 1980, historically Black colleges and universities produced about half of the education baccalaureates awarded to minorities. Sustaining their capacity requires first that these institutions remain financially healthy. Second, it requires that they have access to scholarship resources to recruit academically able freshmen. Third, it requires the more than one hundred historically Black colleges, as well as Hispanic and tribally controlled institutions, to establish the preparation of quality teachers as a near-term priority for the institution as a whole and not merely for the institution's Education Department.

Develop more creative recruitment and outreach programs for prospective teachers. An aggressive campaign to visit every high school in the 25 largest cities in the United States to encourage minority students to consider teaching as a career should be mounted by schools of education, local teachers' unions, historically Black colleges and universities, and other predominantly minority institutions. Recruiters should emphasize the pending shortage of teachers; the critical need for minority teachers; and for minority teachers as leaders in minority communities; and the recent improvements in teacher pay scales and working conditions in all systems.

Support alternative paths into teaching from other professions. The Departments of Education and Defense should cooperate to establish a program that supports master teaching graduate programs for college-trained, career military personnel leaving the Armed Forces. Modest living stipends in conjunction with existing military education benefits could be a powerful inducement to enter teaching to the 5,000 college-trained military personnel-almost all of them male and highly experienced at bending complex bureaucracies to achieve difficult goals-who retire from the Armed Forces every year. An important model is now underway at the National Executive Service Corps to recruit mathematics and science teachers from industry and the military.

However, alternative routes must provide assurance that those who enter classrooms are not only bright and knowledgeable, but are also prepared to teach. As the American Association of Colleges for Teacher Education points out in its policy statement, "Alternative Preparation for Licensure," such routes should "recognize the unique strengths of prospective teachers from nontraditional backgrounds, and prepare these individuals to meet the same standards that are established for others who enter the profession."

Create a National Merit Teaching Scholarship Program. A federal effort, accompanied by similar state initiatives, should be mounted to offer merit-based grants of up to $5,000 annually for at least three years to outstanding minority students who agree to enter public school teaching for at least three years following graduation.

Develop loan forgiveness programs for high-ability minority students to attract them to teaching. Participating students should be given loans that are forgiven by the federal or state government if the recipient completes an agreed-upon number of years in teaching. Participating students should be required to meet high academic standards.

DISCUSSION: MINORITY FACULTY

Alaska Natives, American Indians, Blacks, and Hispanics are grossly underrepresented among doctoral recipients. They received only 5.6 percent of all doctoral degrees and 8 percent of all professional degrees in 1986. The fields producing the fewest number of doctorates were the sciences and engineering. The quality of minority education in America is inextricably tied to the quality of those providing educational leadership at degree-generating institutions. Clearly, achieving this recommendation requires strengthening the performance of the entire educational "pipeline." But it requires as well special attention to the unique financial needs of low-income and minority students in graduate school.

Establish a National Doctoral Opportunities Program. It should be built on: (1) expanding existing doctoral development efforts, and (2) creating initiatives to increase the number of minorities receiving doctorates annually to at least 6,000 by the year 2000. We propose a two-stage process. We should double the support for existing programs, which currently assist about 2,000 minority scholars to achieve the doctorate each year. The Department of Education's Graduate and Professional Opportunities Program (which supports about 800 minority students) and fellowships supported by the National Institutes of Health and the National Institute of Mental Health and the National Science Foundation, should be doubled. We should also create a new partnership among universities, foundations, corporations, and state governments, which should aim at enrolling at least 25 additional minority doctoral candidates at each of 100 research institutions by the year 2000.

GOAL 5

Strengthen the school-to-work transition so that minority students who do not choose college leave high school prepared with the skills necessary to participate productively in the world of work and with the foundation required to upgrade their skills and advance their careers.

ACCOMPLISHING GOAL 5:
RECOMMENDED STRATEGIES FOR STRENGTHENING THE SCHOOL-TO-WORK TRANSITION

- **Replicate promising efforts in this area such as the Boston Compact.**
- **Provide summer and academic year internships, apprenticeships, and cooperative worksite training.**

DISCUSSION: SCHOOL TO WORK TRANSITION

The lack of a systematic bridge between school and work disproportionately harms poor and minority students. They have access to few resources or information networks to obtain mainstream jobs. In labor markets, word-of-mouth contacts among people who know and trust each other matches jobs with job seekers. Middle-class parents often have the contacts and resources to be good job developers for their children. Low-income Black and Hispanic parents usually are not so well positioned. Also, the location of available jobs may pose significant problems for inner-city youth and minority youth in isolated rural areas who do not have access to transportation to the available employment.

Unlike Japan or West Germany, few American high schools are linked to jobs. We need to build alternative pathways from the high school which combine working and learning into an integrated approach that takes full advantage of the practical orientation of many young people and uses this interest to stimulate the learning of more theoretical concepts. These pathways should be designed so as not to foreclose options for subsequent advancement or college level studies.

**A Step Forward
for Summer Learning**

The Summer Youth Employment and Training Program has supported the Summer Youth Training Education Program (STEP) that provides a combination of work, personal development, and education in the summer. STEP has been carefully evaluated and has demonstrated that it reduces the summer loss of mathematics and reading skills among participants in comparison to control groups, and has significantly reduced such behavior problems as teen pregnancies and drug abuse. STEP was in place in 62 cities and counties in the summer of 1989.

Replicate promising efforts in this area such as the Boston Compact. The essential mission of city-wide compacts, such as the Boston Compact, is to stimulate academic achievement and career readiness among students. Under the Compact, students contract to meet certain standards for attendance and achievement, and school authorities agree to make specific improvements in performance. In return businesses agree to preferential hiring of students who meet the specified standards. Each of the parties in the compact agrees to commit to a set of measurable goals or outcomes and to a system established for evaluating each through time. Useful experience and some success in linking school to work has been achieved in other places as well, such as Compacts in Cleveland, Portland, Louisville, and several cities with which the National Alliance of Business is collaborating; the Partnership Academies operated in Philadelphia and in various California cities; the Regional Occupational Program in California; the Work Place Study program in St. Louis; and various school-to-apprenticeship linkage programs conducted in Alabama, Maryland, and several cities across the country.

Provide summer and academic year internships, apprenticeships, and cooperative worksite training. An organized effort among employers is needed to provide students with appropriate skills with access to jobs and structured training during summers, to part-time jobs after school, and to jobs with career potential after graduation. Among the tasks of this effort would be (1) to convey to schools more clearly and precisely the nature of qualifications needed for jobs; (2) to relate performance in school better to the ability to obtain a job, thereby increasing student incentive to achieve; (3) to expand and improve various forms of structured worksite training arrangements for "learning by doing" during the last two years of high school, such as cooperative education, pre-apprenticeship programs, and apprenticeships; and (4) to promote the development of practical and formal career ladders for high school graduates.

GOAL 6

Provide quality out-of-school experiences and opportunities to supplement the schooling of minority youth and adults.

ACCOMPLISHING GOAL 6: RECOMMENDED STRATEGIES FOR OUT-OF-SCHOOL OPPORTUNITIES

- **Establish a National Youth Service.**
- **Double the capacity of the Job Corps.**
- **Expand and improve basic education and training services for youth and adults under the Job Training Partnership Act.**
- **Make available financial aid for those in the workforce who want to go to college or other forms of postsecondary training.**

DISCUSSION: OUT-OF-SCHOOL OPPORTUNITIES

Establish a National Youth Service. The establishment of a National Youth Service could improve education in several ways. Young people who participate in service programs strengthen their skills and knowledge. National service could, in addition, provide a sense of unity that comes when young people from different backgrounds are united in the achievement of common goals. Tasks that might be performed through a national youth service include tutoring, helping to improve physical facilities, helping in school-based service centers, and serving as teachers' assistants.

Double the capacity of the Job Corps. There is solid evidence that the Job Corps, the nation's largest training program for school dropouts, improves employment outcomes. Those who attended Job Corps averaged 15 percent more in earnings per year than did a similar group of non-participants. A higher share of participants completed high school, went into the military and avoided dependency on welfare. While the cost of the residential Job Corps is high (currently about $9,500 per participant/year), evaluation has demonstrated that the program's benefits exceeded its cost by more than 40 percent. Several elements in the Job Corps model help explain its success. It provides a mix of remedial education and skills training delivered in a residential setting, free from distracting influences, making it easier to upgrade skills and change behaviors.

Expand and improve basic education and training services for youth and adults under the Job Training Partnership Act. Local JTPA programs currently serve only about 5 percent of the eligible population, many of whom are minorities. In real terms, funding for employment and training programs has declined 70 percent since 1980. JTPA offers great potential for effectiveness in second-chance learning. Private Industry Councils, mandated under JTPA in every locality across the nation, have demonstrated themselves to be responsive to community interests. Through JTPA, alternative learning environments can be provided that make use of instructional approaches different from those conventionally used in schools. This approach can combine work and learning, be individualized and competency-based, and be delivered in an open-entry,

open-exit mode, using alternative instructional methodologies.

Make available financial aid for those who want to go to college or other forms of postsecondary training. Financial aid for postsecondary studies can be used together with counseling and mentoring programs as important incentives to motivate students to achieve in school, as exemplified by Liberty Scholarships in New York State, the various "I Have a Dream" programs, or the "last dollar" scholarship assistance programs under the Boston Plan for Excellence. But it is also important to maintain incentives for learning after individuals leave high school. Several firms provide tuition reimbursements for employees who successfully complete college courses or other job-related training. Some colleges have established "colleges for working adults" with schedules designed to facilitate working adults achieving a baccalaureate degree within a reasonable time period. The key point here is that although everyone may not want to enroll in college, especially immediately after high school, everyone should engage in learning beyond high school and we should keep options open for individuals.

WHAT WE MUST DO: FAMILY, COMMUNITY, PUBLIC, AND PRIVATE RESPONSIBILITIES

The recommendations outlined in this Action Plan are broad and difficult, but they are also necessary and possible. To carry out these recommendations will take a truly national commitment of energy and resources, but the alternative is surely even more costly. The evidence can be gleaned from scholarly papers and economic forecasts about the growing expense of ignorance, but the results are in plain view on our streets and are replayed every evening on the 7:00 news. The answers lie in our nation working together, at every level, in what is the greatest national challenge of the decade ahead. To provide educational excellence for all is not simply to address problems faced by minorities: our destiny as a great nation hangs in the balance.

Following is a summary of the roles that must be played by various segments of American society in carrying out recommendations from the Plan.

THE ROLE OF MINORITY FAMILIES AND COMMUNITIES

The bedrock of a new future for our children and youth lies in our communities. Parents and community groups must take the leadership in suggesting new directions and new solutions to put before the public. There are two reasons why minorities must lead. First, no other Americans understand minority problems so well, and no other Americans have more experience with what works. Second, and equally important, minorities must lead because our stake in our own communities, and the goals set forth here, are our priorities, for ourselves and for our country.

The strongest leadership is the leadership of example. It begins at the elemental levels of the family, with efforts that parents can make, such as monitoring homework and supporting local teachers and schools. Community groups such as churches and social organizations, also have a role to play.

It is the responsibility of every family, regardless of racial or ethnic background, income level, or educational experience, to help nurture a love of learning in their children, in and out of school. Some parents or care providers are unable to do so because of their own limited educational opportunities. Many lack the most basic requirements, such as a permanent home or adequate food.

Minority parents are frequently reluctant to contact school personnel because they are intimidated by teachers or by language or cultural barriers. Many parents will need help from schools and local governments in understanding what is required to make this nurturing possible, and that help should be provided. Nonetheless, to the best of a family's ability, this responsibility must be fulfilled.

Students, of course, have a major responsibility for their education. While they are not to blame for uncaring or poorly trained teachers or for inadequate materials and facilities, they are responsible for their conduct, their treatment of others, and the level of effort put forth to learn in even the poorest of circumstances. Despite often having to study in deficient circumstances, minority students in particular must set their sights high. It is not sufficient for an Alaska Native, American Indian, Black, or Latino student simply to pass or to "get over" when excellence is possible.

Finally, minority community leaders and those of us who have achieved economic and educational success must take responsibility for our own peoples. Our energy, ideas, and money must return to our communities and to our children. No one can—or should—do it for us.

Roles and responsibilities of minority families and communities include:

- instilling the highest educational expectations in our children;
- ensuring that students get to school on time and are supervised when they leave school;
- setting aside uninterrupted time in the evening and a place devoted to homework;
- taking our children to libraries, which are always free, and museums, which usually have free evenings or afternoons;
- encouraging children to read;
- taking responsibility for our children's television watching and making sure it includes programs such as *Reading Rainbow*, *Sesame Street*, *3-2-1 Contact*, and *Square One* that help build interest in science and learning;
- attending school meetings and becoming involved in school activities through a PTA or other school organization;
- monitoring student progress through regular contact with teachers;
- early planning with our children for college;
- meeting with school personnel to ensure that children take pre-college courses;
- enrolling children in school or community-sponsored after-school, Saturday, and summer programs;
- participating in mentoring programs and community organizations;
- returning physically to our communities whenever possible to serve as role models; and
- investing our money and our attention in our people.

THE ROLE OF TEACHERS AND ADMINISTRATORS

It is upon the shoulders of teachers and administrators that so many of the recommendations made to improve education for minority students fall. Indeed, the task of school restructuring is necessarily a local task. As the nationwide education reform movement has already begun to show, "top-down" directives are far less effective than "bottom-up" energy. Yet without the proper support and training, without decent salaries and professional working conditions, and without the confidence and cooperation of communities, families, and students, no teacher or administrator can bear the load.

Teacher and administrator roles and responsibilities discussed in the Plan include:

- understanding the restructuring alternatives open to their schools and stepping forward to participate in the discussion of change within their schools;
- holding higher expectations for minority youth and helping them to achieve academic excellence;
- being knowledgeable of the culture and language of all children in the classroom, and offering instruction that reflects and respects cultural differences;
- reaching out to families and communities and involving them in the education of their youth;
- utilizing more effective instructional strategies with culturally diverse student groups, such as cooperative learning, peer tutoring, and mixed ability groupings, rather than the debilitating practices of tracking and remediation; and
- working summers to learn additional languages, becoming familiar with multicultural curricula, planning for restructured schools, training to work with families and gaining new pedagogical skills.

THE ROLE OF SCHOOL DISTRICTS

It is at the individual district level where the many and often conflicting demands of parents, students, educators, communities, and local, state, and federal government agencies must be balanced. In this clashing of interests, it is the district's responsibility to make as its highest priority the needs of the children with the fewest resources and the most to gain.

School districts around the nation are beginning to experiment in ways that support many of the recommendations in this Plan. According to the General Accounting Office, more than half of the nation's school districts have begun to implement "effective schools" programs, which incorporate factors such as staff consensus on educational goals and procedures; an emphasis on the acquisition of basic and higher-order thinking skills; high expectations for all students; and continuous assessment of progress. School districts such as Miami, Rochester, Memphis, San Diego, and Denver are taking large strides towards restructuring, with the latter two districts abolishing remedial courses in favor of keeping students of mixed abilities together in the classroom. Districts are experimenting with closer ties to the community, such as the closely-watched experiment in Chicago, where newly-elected school councils made up of teachers, parents, and community leaders will have budgetary and hiring authority for individual schools. Districts are attempting to attract and retain qualified teachers through better salary packages and more responsibility for

those closest to the students. In short, much is happening, often in isolation or in small experiments, that show great promise for change.

In this Plan, we have made specific recommendations that require leadership at the district level. These include:

- improving teacher salaries and working conditions;
- increasing the number of precollege counselors, beginning at the middle school level;
- developing programs to recruit minority and bilingual teachers;
- initiating and encouraging restructuring efforts that make schools responsible for student outcomes;
- increasing linkages between schools and families;
- working with local agencies to coordinate the delivery of social services for students and their families;
- increasing the length of the school day or providing quality after-school activities;
- making year-round school for students mandatory every third year;
- furthering the ability of schools to serve as resource centers within minority communities through after-school and evening programs;
- helping to prevent summer learning loss through high-quality summer programs for low-income and minority youth;
- training teachers to work with a multilingual, multicultural student body;
- making bilingual classes available for students while they learn English, and requiring all students to learn at least two languages;
- eliminating tracking in schools;
- incorporating new approaches to the teaching of science to expand science literacy for all students;
- implementing cooperative learning and mixed ability groupings for all students;
- requiring students to participate in community service activities;
- developing a core curriculum for all students that prepares them for college or a career;
- establishing linkages with local employers to further apprenticeship and mentoring opportunities; and
- funding magnet schools, career academies, and schools-within-schools at every school site.

THE ROLE OF HIGHER EDUCATION

The mix of moral and practical motivations that is driving the nation's renewed interest in a quality education for minority Americans is crystallized in the situation confronting predominantly White colleges and universities. As public and private institutions helping to shape the future of American society, they have a powerful moral responsibility to provide equal educational opportunities for all students, and to diversify their faculty and staff. But as institutions often struggling to survive declining "traditional" enrollments, many colleges and universities are encouraging diversity for fiscal, as well as moral reasons.

Higher education is beginning to understand that its responsibility for educational diversity begins long before student orientation week. As competition intensified over the past twenty years for a relatively narrow field of well-prepared minority students, higher education began involving itself far earlier in the development of potential minority college students. We believe that colleges must expand their definition of affirmative action to include efforts made in conjunction with local schools and communities to nurture minority youngsters. Similarly, colleges must reach out to local community colleges to mine the talented minority students there that so infrequently transfer to four-year institutions. Further, we believe that higher education must institute the same kinds of incentives now proposed at the pre-college levels by linking state funding, faculty and staff salary and promotion decisions, and accreditation to outcomes in minority student and faculty recruitment and retention.

Similarly, universities are comprehending that their responsibility continues after the baccalaureate degree is granted. The dearth of minority faculty can only be addressed by the most careful attention to the development of minority doctorates through nurturing of promising minority undergraduates and the funding and mentoring of minority graduate students.

Finally, colleges and universities of all sizes and missions must turn attention inwardly to the climate and living conditions faced by minority students, faculty, and staff on their campuses. The increasing number of race-related incidents on college campuses calls for leadership from the campus administration, but also for programs, curriculum changes, and policies against discrimination and harassment that are strictly enforced.

Few institutions have combined so many of these approaches as the University of Wisconsin. Through its "Madison Plan," the university intends to double the number of minority undergraduates, create financial aid packages for low-income students, hire 70 new minority faculty, require ethnic studies courses, and hire or promote 125 minority academic staff members. Further, the University of Wisconsin will work with local high schools to improve graduation rates, and will double the number of fellowships to minority students in their graduate and professional schools to encourage more minority students to pursue advanced study.

Roles and responsibilities for higher education discussed in the Action Plan include:

- linking salary and promotion decisions to effectiveness in facilitating the graduation of minority students;
- linking accreditation decisions to progress in minority student, staff, and faculty recruitment and retention;
- working with local school districts to offer an optional 13th year after high school on college campuses to ease and strengthen the transition from school to college;
- offering a residential summer science program for minority high school juniors;
- sponsoring Saturday academies for local minority youth using college faculty and students as resources;

- forming partnerships with local school districts to involve students and faculty in the teaching and tutoring of minority students, in pre-college counseling, and as staff in pre-service and in-service teacher preparation, especially in the sciences;
- developing and enforcing policies against discrimination and harassment;
- establishing transfer centers at two-year colleges;
- continuing efforts to meet the financial needs of low-income students through institutional grants and work-study programs;
- revamping teacher training programs to strengthen the preparation of new teachers and to enable them to understand and reach youngsters of differing cultural and ethnic background using various instructional strategies; and
- revising pre-service training for counselors to increase familiarity with college admissions and financial aid issues.

THE ROLE OF STATES

No observer of education policy can fail to be impressed by the vigor and scope of state efforts in the 1980s to improve education. Through the leadership of individual governors and state legislatures, as well as organizations such as the Education Commission of the States, the National Governors' Association, the Council of Chief State School Officers, the State Higher Education Executive Officers, and others over the past decade, some of the most important policy developments have occurred at the state level.

While these policy developments have been well-intentioned, some have ironically ended up working to the detriment of minority students. For example, efforts spurred by *A Nation at Risk* to raise test scores and graduation requirements that were not accompanied by additional resources to help students meet those requirements deepened divisions along socio-economic lines. A second unresolved issue facing states is the continued funding inequities among districts within several of the states. Renewed court challenges in the decade past have led to decisions ordering new funding formulas in Texas, New Jersey, Minnesota, and Kentucky, with cases pending in Alaska, Connecticut, Indiana, Montana, North Dakota, Oregon, and Tennessee.

While there has been a rapid growth in the state share of funding for public schools—from 39 percent in 1971 to 50 percent in 1987—state funds remain inadequate to meet the most pressing needs for which school districts are turning to the states for help. For example, a 1988 survey by the Education Writers Association showed that 25 percent of the nation's school buildings are "shoddy places for learning," 33 percent are "only adequate" and "because of growing enrollments and deferred maintenance could easily become inadequate," and the remaining 42 percent offer "starkly superior environments compared to those school districts even in the same state because their communities can afford them." Further, a study conducted by MDC Inc. and funded by the Charles Stewart Mott Foundation estimated that just five percent of state education funds are used "specifically for service to at-risk youth."

The state role is of course not limited to funding. States are now working hard to support school restructuring, providing schools with flexibility from state regulations as well as the money needed to launch these efforts. Florida, Indiana, Michigan, Pennsylvania, and South Carolina, for example, have established financial incentives for high-achieving schools. In Utah, Texas, Colorado, and other states, legislatures are supporting experiments with year-round schools. In Iowa, Arkansas, New Jersey, Maryland, Minnesota, and other states, efforts are being made at the state level to coordinate schools with local social services. But according to the MDC study, only a handful of states, including South Carolina, Arkansas, New Jersey, Colorado, Kentucky, and Ohio, have taken steps that are leading to a comprehensive set of plans and programs to serve minority and low-income students.

Finally, it is state agencies, particularly state education and employment agencies, that will bear the major weight of policy development, priority setting, and resource coordination. The "fit" between the state's education system, employment security programs, and job training efforts for minorities will be constructed here. As part of this effort, we encourage every governor to establish a Council on Educational Equity to review, consider, and implement the goals we put forward, to integrate education and training for minorities at the state level, and to monitor continuing efforts, with a view to policy recommendations and new initiatives, from the highest levels of state government to the most immediate levels of service delivery.

In this Plan, we have made specific recommendations that require leadership at the state level. These include:

- equalizing funding among districts in all 50 states and establishing long-term funding commitments to improve the physical and human resources available to low-income and minority youth in each state;
- establishing state funding incentives and accountability measures to ensure that the best teachers are attracted to the schools that need them the most;
- reviewing state regulations to facilitate restructuring activities in schools;
- establishing incentive programs at public colleges and universities to encourage recruitment and retention of minority students and faculty;
- revising articulation agreements between two- and four-year colleges to facilitate transfer;
- establishing transfer centers at community colleges;
- supporting district efforts to establish 11-month schooling and extended school days;
- supporting the development of schools-within schools, career academies, and other special academic programs within public schools;
- reviewing state curriculum requirements to facilitate local implementation of a core academic curriculum;
- supporting schools using cooperative learning, grade clustering, and other alternatives to tracking;
- eliminating the inappropriate use of standardized tests, such as cut scores for teacher certification, and working to develop more suitable tests that help diagnose, rather than limit, student progress;
- assisting minority and low-income students attend college through tuition guarantees, such as New York State's Liberty Scholarships, and through increased grant aid;

- funding personnel and programs that help provide pre-college information to minority and low-income youth about higher education; and
- establishing a State Council on Educational Equity.

THE FEDERAL ROLE

Since 1980, the federal role in education has become increasingly visible. It was the leadership of Education Secretary T.H. Bell that helped spark the education reform movement with the release of *A Nation At Risk*. Secretary William Bennett brought renewed attention to the distressing conditions in urban school districts. In September, 1989, President George Bush and Secretary Lauro Cavazos brought together the nation's governors to focus national interest on school improvements, and are working to set new national goals for educational achievement.

Ironically, in a period in which the symbolic role of the federal government in education grew, Washington's fiscal commitment to education declined significantly, although bipartisan support in Congress prevented the cuts from being as deep as had been requested by the Executive Branch. According to the U.S. Department of Education, funds appropriated in the federal budget for education programs increased from $34.3 billion in 1980 to $43.3 in 1988 in actual dollars. But adjusting the figures for the 43.6 percent inflation in that period shows that in constant 1988 dollars, federal spending on education actually dropped 12.2 percent, from $49.3 to $43.3 billion. In other words, adjusting for inflation, federal spending on education in 1988 was $6 billion less than necessary to maintain programs at their 1980 levels. Overall spending on elementary and secondary education programs, for example, dropped 19.2 percent in constant dollars, while spending on postsecondary education fell 29.6 percent in constant dollars. University research increased 25.8 percent in constant dollars in the 1980-1988 period.

Many of the programs that have particular benefit for minority students suffered greatly in constant dollars: child nutrition programs fell 10.2 percent, vocational and adult education fell 23 percent, and Chapter I grants for the disadvantaged fell 17.3 percent, now serving only about half the eligible participants, down from 75 percent coverage in 1980. Head Start funding grew 20 percent in constant dollars, but still only serves about one-quarter to one-third of the eligible population. At the college level, spending on Pell Grants, which is the largest federal student grant program, grew about 17 percent between 1980 and 1988 in constant dollars, but this gain must be placed in perspective: the cost of attending a public four-year college increased by 26 percent in constant dollars between 1980 and 1988 and costs at a private four-year college increased 47 percent in constant dollars. Further, the number of students actually receiving Pell Grants has declined by 10 percent since 1980. Spending on the smaller federal grant program, the Supplemental Educational Opportunity Grants, has fallen 14.7 percent in constant dollars. Federal spending on the College Work-Study program fell 28 percent in constant dollars.

The form in which students receive financial aid has changed in the last decade: in the mid-1970s, a period in which 33 percent of Black and 36 percent of Hispanic high school graduates went on to college, grants made up

80 percent of the average financial aid package. By 1986, however, grants were only 50 percent of the share, and just 29 percent of Black and Hispanic high school graduates went on to college. In 1988, grants were just 47 percent of the total. The prospect of such loan burdens is devastating to the college dreams of low-income minority students: a 1986 study by the National Institute of Independent Colleges and Universities and the United Negro College Fund reported that loan burdens for low-income Black students, sometimes greater than their families' annual incomes, was discouraging a generation of potential scholars.

Certainly, the federal role in education spending has always been relatively small. In 1990, of the $353 billion to be spent by the public and private sectors on education, federal expenditures will account for only about 6 percent of the total; private spending will account for 27 percent, and the balance will come from state and local governments. But the role of federal funding is especially crucial to minority students, serving to address inequities in the quality and quantity of educational experiences available to Americans of differing levels of income. In some cases, where federal grants do not meet the needs of college students, for example, states and the colleges themselves have stepped in to fill the balance. Grants from states and institutions have increased 46.5 and 78.8 percent respectively between 1980 to 1989 in constant dollars. But the ability of states and institutions to make up for federal cuts varies from state to state and region to region. In pre-college education, 1987 per-pupil expenditures were $3,977 for the nation as a whole, but ranged from $2,350 in Mississippi to $3,728 in California to $6,947 in New York to $8,010 in Alaska. Indeed, Mississippi, whose public school enrollment is 51 percent Black, receives nearly one-sixth of its education budget from the federal government: even marginal changes can be devastating to students there. Further, about 90 percent of the money states spend on remediation comes from the federal government, and most of the national research on dropout prevention, curricula, and other issues of critical concern to minority students is federally funded.

Thus, for minority students in the nation's schools and colleges, the federal role is crucial to ensuring equity in opportunities among states and regions. That role includes funding for the immediate educational needs for low-income students, through programs such as Chapter I and college financial aid, and also through programs that prepare students for learning, such as Head Start and the various nutritional and health programs now underfunded by the federal government. The U.S. Department of Education must serve as an advocate for minority students in fighting for necessary funding for educational programs and for educational research; so too must other federal agencies make minority students a priority, such as the Department of Labor, which is responsible for employment and training programs, such as the Job Corps. No state alone can shoulder the burden imposed by hunger, lack of prenatal care, and poor health upon learning: the scope of these needs, and others, such as child care and housing, call increasingly for an expanded federal role.

The federal government must play additional roles as well, beginning in the area of moral leadership. After a decade in which civil rights enforcement by the federal government "dramatically declined," as the Citizens Commission on Human Rights points out, it is time for the Department of Education

and other agencies to renew their commitment to the rights of minority Americans and the laws passed by Congress to enforce them. In 1990, twenty years will have passed since the NAACP Legal Defense and Education Fund filed suit in what is known as the *Adams* case to force the federal government to monitor and enforce desegregation in public colleges in 18 Southern and border states. The continued efforts of the Department of Education to resist enforcement of Title VI of the Civil Rights Act of 1964, which bars racial or ethnic discrimination in programs receiving federal money, is morally unacceptable.

The federal government also has a special responsibility for Indian education. In nearly 400 treaties negotiated from the American Revolution to 1871, American Indians ceded nearly one billion acres of land in exchange for services, especially education. But as the congressional report released in November, 1989, by the bipartisan Special Committee on Investigations revealed, the current approach to delivering education and other services to American Indians is not working well. The Special Committee recommended a radical shift to self-determination by American Indians themselves. This emphasis on self-determination concurs with our own call for greater participation by minorities in education as well as with a growing body of judicial decisions on tribal sovereignty. Self-determination should not mean funding cuts, however; the federal government must not retreat from its obligations to adequately finance American Indian education.

Finally, we encourage the President of the United States to become directly involved with the goals stated in this report by requiring serious consideration, throughout the Executive Branch, of the resource implications of the specific recommendations in this document. Further we recommend the establishment of a National Human Resources Development Council, paralleling the Council of Economic Advisors and at the same level of importance for policy making. The symbolic importance of such a Council—demonstrating the federal commitment to human resource development as a top national priority—cannot be overestimated.

In this Plan, we have made specific recommendations that require a federal role. These include:

- full funding of prenatal and nutritional programs to serve all eligible children and families, including WIC, and child nutrition programs;
- full funding of Head Start for eligible families, increasing enrollment incrementally over the next five years to reach full participation by 1995;
- full funding for Chapter I, increasing enrollment incrementally over the next five years to reach full participation by 1995;
- allowing greater flexibility in the use of Chapter I and other federal categorical programs, ensuring that performance standards for minority and low-income students are strictly enforced;
- expanding of talent search programs to the middle schools;
- doubling the capacity of the Job Corps;
- increasing the federal share of student financial aid, and restoring the grant/loan balance to at least the mid-1970s levels for low-income students;

- increasing support for historically Black and tribal colleges, and expanding eligibility in federal programs to include institutions with 25 percent or greater Hispanic enrollment;
- expanding education and training services available under the Job Training Partnership Act;
- funding residential summer science academies for minority youth;
- creating a national merit teaching scholarship and loan forgiveness programs for teachers;
- establishing a national Doctoral Opportunities Program to produce more minority scholars;
- increasing support for bilingual and multicultural programs and curricula;
- establishing a National Youth Service;
- supporting efforts to give American Indian tribes control over Indian schools and education;
- supporting efforts to improve the school-to-work transition and to boost apprenticeship opportunities for minority youth; and
- establishing a National Human Resources Development Council.

THE ROLE OF THE PRIVATE SECTOR

Corporate America has already taken the lead in pressing for structural change in the nation's schools, inspired in part by their employees' need for extensive remedial training, requiring spending of as much as $44 billion annually. The range of private sector involvement in education has vastly increased in the decade past, from personal interventions such as the "I Have a Dream" program, in which wealthy benefactors work with an individual class of students to guarantee their college education, to large contributions such as those made recently by Coca-Cola and Comsat, to broad coalitions such as the Boston Compact, in which business and school leaders work together on joint educational and employment goals.

The private sector must continue its efforts to provide direct support to schools, through financial or in-kind contributions, mentoring, and research and employment opportunities for students. Further, since the capacity of the private sector to add to the resources available to education is relatively small compared to the need, the role of business leaders in pressuring government agencies for increased funding and structural changes is crucial and must continue.

A business sector that has particular importance to minority education is the broadcast industry. Television, radio, and film so strongly influence the attitudes and dreams of children, especially those children who do not enjoy an affluent background. We concur with the congressional Task Force on Women, Minorities, and the Handicapped in Science and Technology that the media has a deep responsibility not only to keep the public's attention focused on the needs of minority youth, but also to present a positive image of education and to promote a positive self-image among minority youth. The devaluation of minority characters on television and in film is not simply racist; it is damaging the lives of minority youth who see themselves most often portrayed as hustlers, criminals, drug addicts, or characters with questionable ethics.

This harms nonminority youth as well who come to see their minority peers in that same dim light. It is not enough to ask that the entertainment industry produce more television shows like *Sesame Street* or more films like *Stand and Deliver*; also needed are more shows that portray minority Americans of all walks of life as positive, productive human beings, meeting their civic, family, and employment responsibilities.

Among the roles and responsibilities recommended for the private sector in this Action Plan are:

- developing apprenticeship programs, career academies based on models such as the California Partnership academies, job training programs, and other efforts to help smooth the transition between school and work for those not headed immediately to college;
- expanding mentoring and adopt-a-school programs so that every child and every school is covered;
- establishing regional cooperative projects, such as the Boston Compact, that bring together school and business leaders to develop course requirements and employment commitments;
- devising employee education programs to help adult learners gain academic skills and enter college;
- developing regional consortia to offer tuition guarantees to all students, such as the Cleveland Initiative for Education, or last-dollar scholarships for minority college-bound students, such as the Boston Plan for Excellence;
- allowing the establishment of mini-schools at large businesses, such as those found in Dade County in Florida, that help bring minority parents closer to schools, or work-school programs such as Rich's Academy, sponsored by the Cities in Schools Project at Rich's department store in Atlanta, in which underachieving students combine work with school at the worksite;
- supporting restructuring, based upon the lessons learned by business with its own changes over the past decade to better compete in the world economy;
- investing in minority workers as employees at all levels and clearing the path toward upward mobility within their companies; and
- supporting educational television during the after-school hours.

THE ROLE OF FOUNDATIONS AND INDIVIDUAL PHILATHROPISTS

The philanthropic community's involvement in the future of minority education is critical. First, more foundations and individuals need to respond to the areas of concern dealt with in this report because of their potential for "making a difference" both to groups and to the nation. Second, we encourage the nation's foundations to continue to do what they now do so effectively: search for those points of leverage and potential multiplication of effort that can help wide-scale change emerge from comparatively small resources. These include supporting pilot efforts such as home-to-school transition teams (Pre K–grade 2) and alternative preparatory schools (grades 7–12).

MEETING THE CHALLENGE

More than twenty-five years ago, Martin Luther King, Jr. spoke the sentence that distills the meaning of this nation: "I have a dream." We believed him because he made us see what he could still see, but what the nation had lost sight of, and we set to work.

Despite its frequent failure to live up to its highest aspirations, the greatness of the United States has always derived from its ability to blend the strengths of very different kinds of people. It is perhaps the only country in history deliberately founded not on the past, but on the future it set out to achieve.

As America progressed, its peculiar genius has been that each generation has somehow learned to recast that vision in a new guise, as history has presented each generation with new challenges and opportunities. Thus, this nation has achieved the ideal of independence, responded to the challenge of war, created an unparalleled standard of living for most Americans, accepted the mantle of world leadership, and committed itself to the pursuit of peace and to the ideal of social justice.

But no matter what form it took, the future has never been fanciful or utopian; even though Americans have always kept their eye on the future, they have given their hands to shaping the present. The true gift of America is the ability to translate lofty goals into tasks that men and women could grasp and achieve. The difficulties encountered have only made the effort more interesting and the task more worthwhile.

America has succeeded because, at every turn, it has been able to bring its most precious national resource to bear on the tasks at hand: a diverse and talented people. In the twentieth century, it has been the slow maturation of the nation's pluralism, the growing recognition that every current in the American stream teems with new life and greater possibility, that has expanded this society's reach and enriched its members.

The one force that has sustained and empowered *all* our people, has been the power of education. It has been our schools that have equipped individuals to take their places in the great work of transforming visions into realities. But today, as we have seen, that power is being dissipated. Minority children, who by right and by virtue of their unlimited potential, surely deserve their own role as visionaries and builders, are being shut out. If, indeed, education is the way we deal with the future before it arrives, then we are truly casting our future aside if we do not bend every effort to open opportunities for minority children. The door to the future for every child is first and foremost the door to the schoolhouse.

A PROPOSAL FOR A NEXT STEP

This Action Plan has presented numerous recommendations to be carried out by the public and private sectors, by minority and majority communities, by large and powerful institutions in consortia, and by individuals acting alone. There is one more proposal to make, and that is for a mechanism to facilitate and monitor the greater changes recommended in the Plan, to ensure that we set and meet the goals for minority students, and to help provide an education that works for every American.

Accordingly, we propose the creation of a nonprofit organization, the Quality Education for Minorities (QEM) Network. The QEM Network will serve as a focal point for the vision and goals set forth in this report, and for promoting its broad strategic action principles. Further, it will periodically assess progress against the goals established in the Action Plan.

Although its initial efforts will focus on members of those groups historically underserved by education (Alaska Natives, American Indians, Black Americans, Mexican Americans, and Puerto Ricans), the QEM Network will advocate quality education for everyone. Following this initial focus in its early efforts, the QEM Network will expand to include other groups poorly served by our educational system because of socio-economic status or language barriers.

The QEM Network will operate in a collaborative mode, working with the many minority and non-minority individuals, groups, organizations, and institutions involved in the activities of the QEM Project as well as with new participants. Through a variety of means, the QEM Network will work to ensure that: (1) the provision of quality education for minorities is explicitly included in efforts around the country to restructure schools, to upgrade teaching standards, and to reform undergraduate education; (2) the pedagogical strategies proven most effective with minority youth are publicized and replicated more broadly; (3) the general public better understands the importance of providing quality education for everyone and of the need to act now; and (4) minority families and communities play an increasing role in the education of their youth and in the raising of their children's educational aspirations and commitment to the discipline and hard work required to succeed in school, in the workplace, and as citizens.

The QEM Network will convene groups to explore specific topics in depth that are related to the QEM Network's purpose, and will carry out joint projects with others that are designed to achieve the goals and vision set forth in this

"[A] new establishment must be created whose main function is to address minority student needs. The following criteria should be met: attention to minority student needs at every juncture of the educational continuum; commitment by the governing board to minority students' potential, high educational standards; the empowerment of minority students as independent thinkers and lifelong learners, and respect for minority students' cultural heritage."

Elmer Washington, First Congressional District Education Advisory Council, QEM Project Hearings, Chicago, June, 1988

plan. In addition, the QEM Network will have a research and evaluation arm that will assist existing exemplary and promising projects with their assessment and evaluation efforts, and will facilitate communication between project directors and others interested in minority education through an accessible, computerized data base and an electronic bulletin board. It will also assist project directors in identifying potential sources of support.

The QEM Network will be unique in a variety of ways. It will be comprehensive in nature (i.e., concerned with all educationally underrepresented groups and with education at all levels). It will serve in a convening, consensus-building, and collaborating role. It will create a computerized communications network for directors of minority-focused education projects and for others interested in the education of minorities. It will advocate the scaling up or replication of educational strategies that work for minorities. It will work to ensure that educational reform efforts at all levels explicitly address the provision of quality education for minorities, and it will issue an annual report card on how well the various sectors (governmental, corporate, educational, philanthropic, and community) are doing in helping to make quality education for minorities a reality.

ESTIMATED COSTS

This Action Plan has identified a series of alternative strategies for providing quality education for minorities. Many of our recommendations do not call for new funding; rather, a reallocation of existing funds (for example, school-linked social services). Still others require no funding or very little funding at all (for example, cooperative learning). Estimates are given below for selected items to provide a frame of reference for setting funding priorities.

To implement these strategies in the nation's 16,000 school districts would require substantial new funding. For example, the Education Commission of the States estimates that, based upon the average per-pupil expenditure of $4,209 for the 1987–88 school year, adding one extra day to a 180-day school year would cost approximately $922 million for all states combined. Hence, to add 40 days (for the 11-month school year we propose) would require almost $37 billion alone. However, if we were to focus on the 25 largest predominantly nonWhite school systems, with their approximately 4.2 million students, (non-Asian minority students are in the majority in 22 of these), the annual costs for the additional two months of schooling would be approximately $4 billion. If we were to implement our recommendation every third year as proposed (i.e., following grades 3, 6, and 9), thereby affecting only approximately 25 percent of the students in any given year, the extra two months for the 11-month school year would cost an additional $1 billion annually.

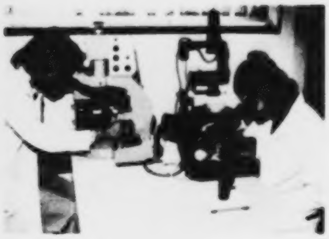
Other estimates of priority areas for this Action Plan are as follows.

- To fully fund Head Start, which currently reaches fewer than 20 percent of all eligible 3- to 5-year olds, would require an additional $4.5 billion.
- Chapter I funds of $3.65 billion currently reach only 40 percent of the youth eligible for services, hence full funding would require an additional $5.5 billion.
- The National Education Association estimates that to serve the 1.6 million students with limited English proficiency through federally-funded bilingual education programs would cost $1.4 billion or an increase of more than $1 billion.

WHAT IF?

What if the federal spending on education had kept up with inflation since the 1980 level of $34.3 billion? With a cumulative inflation rate during that period of approximately 44 percent, the federal support actually available in 1988 ($43.3 billion) would have included an additional $6 billion. By 1989, inflation had increased an additional 5.1 percent. Using Fiscal Year 1989 constant dollars, we outline below how we would use the funds that would be available if the federal government were to return to its 1980 spending level.

If that additional $6 billion were available this fiscal year ($6.3 billion in Fiscal Year 1989 constant dollars) to implement priority strategies contained in this Plan, we would use the funds as follows:



Expand Women, Infants, and Children (WIC) program	$0.8 billion
Head Start (to reach an additional 20 percent)	1.0 billion
Chapter I (to reach an additional 10 percent of eligible students)	0.9 billion
Restructure at least 10% of the approximately 5500 schools in the 22 largest predominantly minority school districts	0.3 billion
Extend the school year in the 22 largest predominantly minority school districts	1.0 billion
Bilingual Education (to reach an additional 30 percent of eligible students)	0.6 billion
Summer Science Academies for minority students in grades 7–12 (affecting approximately 100,000 students)	0.6 billion
In-service and pre-service training of minority science and mathematics teachers	0.4 billion
Federal financial aid to low-income minority undergraduates (to reduce loan burden in financial aid packages) who are prospective mathematics and science teachers	0.4 billion
Development and support of minority doctoral students in science and engineering	0.3 billion
TOTAL	**$6.3 billion**

As the Committee for Economic Development emphasized in *Children in Need,* these budget items represent high-yield investments and not just budget costs. It is not hard to demonstrate that it will cost the nation much more not to make these investments. We also believe that restructuring would make it possible to use existing resources more efficiently. Nonetheless, it is clear that additional resources will be required to attain an equitable and efficient education system.

WHAT IF ADDITIONAL FUNDS WERE ALSO AVAILABLE FROM NON-FEDERAL SOURCES AT THE SAME TIME?

State funds would be required to supplement the additional federal funds now available each year for such programs as WIC, Head Start, Chapter I, and Bilingual Education. The amounts required would vary by state. Beyond these cost-sharing funds, what if additional funds were available from state and local governments, corporations, foundations, and colleges and universities for the 16 states and the District of Columbia in which the 22 largest predominantly minority school districts (see Table 6) are located? Since federal funds would now be available to extend the school year in these districts, we would use additional non-federal funds to support a pilot effort involving several of the initiatives recommended in this report. Such a pilot effort might involve two to ten schools in each of the 22 cities (ranging, for example, from two in cities with fewer than 100 schools to ten in cities with more than 500 schools) as well as schools in Alaska and in Puerto Rico, in the rural South, and on American Indian reservations. Estimates are provided below on non-federal costs of various pilot initiatives assuming an involvement of 130 schools. Details are provided in Table 7 for Fiscal Years 1991–95 in order to show the shifts in sources of non-federal funding we would encourage.

In addition to having an extended school year, each site might be asked to establish a local advisory council composed of parents, community leaders, and teachers; create a partnership with local industry and neighboring colleges or universities; and modify its existing academic core curriculum over time so that it reflects recommendations of such groups as the National Science Teachers Association (NSTA), the National Council of Teachers of Mathematics (NCTM), the Human Biology curriculum being developed at Stanford University, and Project 2061 of the American Association for the Advancement of Science (AAAS). Examples of other changes that might occur during the pilot years include the following:

- Provide supplemental learning activities for at least 100 pre-school children with siblings in the school.
- Create a Home-to-School Transition Team that will serve as an advocate for the children.
- Provide health services that include health and sex education and parenting skills.
- Extend the school day to provide enriching activities for the students and to meet the needs of working heads of households.
- Provide trained mathematics and science counselors.
- Establish drawing accounts (for example, of $1,000 each) for middle and high school science and mathematics teachers for supplemental instructional purposes.
- Offer adult education courses for parents of students at the school.
- Create special career academies including ones for future teachers.

In addition, the salaries of teachers at the participating schools would be supplemented beyond inflation to reach an average annual level of $42,000 by Fiscal Year (FY) 1995. Salary supplements would be needed for approximately 5,000 teachers at the 130 schools participating in the pilot effort at an estimated cost of $8.0 million (using FY 1989 constant dollars).

Assumptions regarding costs (in FY 1989 constant dollars) for priority initiatives from the above list and reflected in Table 7 are as follows:

- Each of the 130 schools would provide supplemental learning activities for 100 pre-school children at a base annual cost of $3,000 per child or **$39 million.**
- Each Home-to-School Transition Team would require an on-site staff of one full-time coordinator and one-half time support staff plus modest funds. Estimated annual costs are $50,000 per site or **$6.5 million** for 130 schools.
- Each site would have one middle school and one high school mathematics and science counselor. Since the rural and reservation sites would have much smaller enrollments, only one such counselor would be provided. Assuming an annual salary of $30,000, the total costs that year for 250 such counselors would be **$7.5 million.**
- Each site would be provided with supplemental funds of $10,000 to be used by the science and mathematics teachers for instructional and enrichment purposes. Annual costs for the 130 schools would be **$1.3 million**.

OTHER PILOT INITIATIVES

Foundations are known for seeding new ideas, for funding model projects, and for assisting with the implementation and evaluation of pilot efforts before they are scaled up or replicated widely. We recommend, therefore, that they partially support an experimental network of preparatory schools for a small number of talented students from the 130 schools participating in the larger pilot initiative described above. More specifically, we propose an experimental network of, say, 5 schools covering grades 7–12, each with an average enrollment of 600 students (for an overall network total of 3,000 students). Each site would be run by an alliance involving the schools from which the students come, neighboring college and university partners, and local advisory councils. These schools would be designed primarily for talented students who are unable to reach their academic potential because of the impoverished and unsafe conditions under which they are forced to live.

Details on the proposed preparatory schools are available in a separate document prepared by the QEM staff; however, costs are estimated to range from $12.0 million in Year 1 during which 1,000 students would be involved (100 seventh and 100 eighth graders at each of the sites) to $44.7 million in Year 5 when 3,000 students would be involved.

Faculty and students, including prospective teachers, at colleges and universities near the pilot network of preparatory schools would staff the schools along with outstanding individuals who have retired from the teaching profession, the military, or industry as well as outstanding teachers from the current teaching workforce who wish to participate in this pilot effort.

We are also proposing that every college and university offer a six-week summer science residential program for at least 50 minority high school juniors. We know, based upon the experience of several institutions with similar efforts (for example, the Minority Introduction to Engineering and the Resource Centers for Science and Engineering Programs), six-week programs of the type envisioned can be carried out at an estimated cost of $1,000 per student, or $50,000 per site to implement our recommendations.

In addition, colleges and universities located near the 22 largest predominantly minority school districts as well as participating schools in Alaska, Puerto Rico, the rural South, and on reservations would be expected to form partnerships with these schools, along with local business and community leaders, to assist the schools in the following ways:

- The pre-service and in-service preparation of mathematics and science teachers.
- The special preparation of mathematics and science counselors.
- Tutoring and after-school, Saturday, and summer science enrichment programs.
- Science and mathematics curriculum revisions to reflect new standards and content such as those being recommended by the NSTA, Project 2061, the Human Biology Program, and the NCTM.

Finally, we urge that an optional 13th year program modeled after the Middle College High School at LaGuardia Community College be established at community colleges near the 22 predominantly minority school districts, in Alaska, Puerto Rico, and near the participating rural and reservation schools in order to provide second chance opportunities for students who have left school. Although funds are not included in our estimated costs, federal and state support would be required along with the colleges' own resources to support this initiative.

TABLE 6
LIST OF 22 LARGEST PREDOMINANTLY MINORITY PUBLIC ELEMENTARY AND SECONDARY SCHOOL DISTRICTS

State	City	Number of Schools	Number of Students (to nearest '000)	Percent Minority	Number of Teachers	Average Number of Teachers per School
NY	New York City	993	940,000	N/A	52,953	53
CA	Los Angeles	619	589,000	83	25,088	41
IL	Chicago	596	420,000	87	21,753	36
FL	Dade County	264	253,000	77	14,014	53
TX	Houston	239	192,000	84	10,499	44
PA	Philadelphia	250	189,000	76	10,756	43
MI	Detroit	268	185,000	91	N/A	N/A
TX	Dallas	188	131,000	80	6,904	37
MD	Baltimore	179	110,000	N/A	5,696	32
TN	Memphis	154	108,000	78	5,225	34
WI	Milwaukee	145	92,000	65	5,565	38
DC	Washington	186	86,000	96	5,498	30
NM	Albuquerque	117	82,000	N/A	4,424	38
LA	New Orleans	119	81,000	N/A	4,663	39
OH	Cleveland	129	72,000	76	3,578	28
TX	Fort Worth	110	67,000	64	3,184	29
GA	Atlanta	113	64,000	N/A	3,737	33
TX	El Paso	74	62,000	77	3,392	46
TX	San Antonio	97	61,000	93	3,393	35
TX	Austin	103	61,000	55	3,879	38
CO	Denver	113	59,000	64	3,512	31
MA	Boston	117	59,000	75	N/A	N/A

SOURCE: National Center for Education Statistics, U.S. Department of Education Survey Report "Characteristics of the 55 Largest Public Elementary and Secondary School Districts in the United States: 1987-88," May 1989.

NOTES: (1) The Island of Puerto Rico is second to New York City with 667,000 students enrolled in 1,756 schools.

(2) This list must also be expanded to include sites in Alaska, Puerto Rico, the rural South, and on reservations in order to reach minority children living in those areas.

TABLE 7
NON-FEDERAL FUNDING REQUIRED BY SOURCE FOR PILOT EFFORTS IN 22 LARGEST PREDOMINANTLY MINORITY SCHOOL DISTRICTS, ALASKA, PUERTO RICO, AND SELECTED RURAL AND RESERVATION SITES

Fiscal Years 1991 through 1995

(In millions and in Fiscal Year 1989 constant dollars)

	FY 91				FY 92				FY 93				FY 94				FY 95				Totals
Program	**S/L**	**C**	**F**	**O**	**S/L**	**C**	**F**	**O**	**S/L**	**C**	**F**	**O**	**S/L**	**C**	**F**	**O**	**S/L**	**C**	**F**	**O**	**by Row**
5% Annual Supplement to Teachers' Salaries beyond Inflation	8.0				8.0				8.0				8.0				8.0				40.0
Early Childhood Education	26.0	13.0			26.0	13.0			26.0	13.0			26.0	13.0			26.0	13.0			195.0
Home to School Transition			6.5				6.5				6.5				6.5				6.5		32.5
Math/Science Counselors		7.5				7.5				7.5				7.5				7.5			37.5
Drawing Accounts for Math/Science Teachers		1.3				1.3				1.3				1.3				1.3			6.5
Alternative Preparatory Schools			12.0			3.0	15.0			4.0	15.0	5.0		6.0	15.0	9.0		9.0	15.0	12.0	110.0
QEM Network			1.7				1.7				1.7				1.7				1.7		8.5
Totals by Column	34.0	21.8	20.2		34.0	24.8	23.2		34.0	25.8	23.2	5.0	34.0	27.8	23.2	9.0	34.0	30.8	23.2	12.0	
Totals by Fiscal Year	**$76.0**				**$82.0**				**$88.0**				**$94.0**				**$100.0**				**$440.0**

Legend: S/L = State/Local Government and Industry
F = Foundations
C = Corporations
O = Other sources, including individual Philanthropists

COMMUNITY COLLEGE

Table 8 summarizes estimates of additional funds required from all sources to fully implement the recommendations contained in the Action Plan nationwide in some instances and only in the schools in the 22 largest predominantly minority school districts in others as indicated.

TABLE 8
ADDITIONAL FUNDS REQUIRED FOR IMPLEMENTATION OF QEM RECOMMENDATIONS IN FISCAL YEARS 1991–1995

(In Billions, rounded to the nearest hundredth billion)

PROGRAM	FY 91
WIC	1.60
Head Start	4.50
Chapter I	5.50
Doubling Child Nutrition	3.45
School Restructuring Grants	0.32
Doubling Job Corps	0.63
Expanded JTPA	2.40
Improved Corrections Education	0.10
Doubling Fellowship Assistance	0.08
Bilingual Education	1.00
National Merit Scholarships	0.03
Science/Engineering Doctoral Students	0.50
Teacher Preparation	0.50
Financial Aid (Prospective Teachers)	0.50
Support to Predominantly Minority Institutions†	0.15
Summer Science Academies	1.80
Extended School Year*	1.10
5 Percent Teacher Salary Supplements*	0.32
Early Childhood Education*	0.90
Home-to-School Transition*	0.15
Math/Science Counselors*	0.33
Drawing Accounts Math/Science Teachers	0.06
Alternative Preparatory Schools	0.05
School-to-Work Transition	1.00
QEM Network	0.01
TOTAL	**$ 27.31**

† Includes tribal colleges, historically Black institutions, and institutions with 25 percent or greater enrollment of Hispanic students.

* In 22 cities in which there are 5,500 schools including 3,000 elementary schools.

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APPENDIX A

CHART OF ROLES AND RESPONSIBILITIES

GOAL 1
Ensure that minority students start school prepared to learn.

RECOMMENDATIONS FOR PRE-SCHOOL YEARS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Increase participation in the Women, Infants, and Children (WIC) Program so that by 1995 all the eligible participants are provided support.	●	●						
Double the participation in child nutrition programs.	●							
Increase federal and state funding for child care programs to cover a 100% participation rate of pre-schoolers with mothers on welfare or for working mothers whose income is 150% of the poverty line.	●	●						
Increase enrollment in Head Start incrementally over the next five years to cover 100% of the eligible population by 1995.	●	●						
Invest in new approaches to easing and strengthening the home-to-school transition.		●	●					●

CHART OF ROLES AND RESPONSIBILITIES

GOAL 2 Ensure that the academic achievement of minority youth is at a level that will enable them, upon graduation from high school, to enter the workforce or college fully prepared to be successful and not in need of remediation. RECOMMENDATIONS FOR THE ELEMENTARY YEARS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Eliminate ability grouping and age-grading in the elementary grades.		●	●	●				
Establish elementary core competencies, including computer literacy.		●	●	●				
Increase funding of Chapter I programs so that by 1995 all eligible children are covered.	●							
Provide access to quality health education by the third grade.		●	●	●				
Actively promote and support the learning of at least two languages by each child.			●	●				
Enlist the cooperation of the media, particularly commercial television and its advertisers, in efforts to ensure that the after-school programming is educational and intellectually stimulating.						●	●	
Extend the school day and year to minimize summer loss and maximize exposure to mathematics and science.	●	●	●				●	

CHART OF ROLES AND RESPONSIBILITIES

GOAL 2

Ensure that the academic achievement of minority youth is at a level that will enable them, upon graduation from high school, to enter the workforce or college fully prepared to be successful and not in need of remediation.

RECOMMENDATIONS FOR THE MIDDLE YEARS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Create small learning communities.		●	●	●				
Staff middle schools with teachers and administrators who are experts in adolescent development.		●	●	●				
Reengage families and the community with the middle schools in the education of young adolescents.			●	●			●	
Stimulate and nourish positive values.			●	●				
Implement the science curriculum reforms recommended by the National Science Teachers Association, and the Human Biology Project, beginning in grade 7, as well as the recommendations of Project 2061 and the curriculum standards in mathematics advocated by the National Council of Teachers of Mathematics for K–12.			●	●				
Make college and career options known to children beginning in the middle school.		●	●		●			
Extend the Talent Search component of the TRIO Programs to the middle years.	●		●					
Promote schools-within-schools, career academies, and alternative preparatory academies.		●	●		●	●		●

CHART OF ROLES AND RESPONSIBILITIES

GOAL 2

Ensure that the academic achievement of minority youth is at a level that will enable them, upon graduation from high school, to enter the workforce or college fully prepared to be successful and not in need of remediation.

RECOMMENDATIONS FOR THE HIGH SCHOOL YEARS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Replace the general track curriculum in high school with a core academic curriculum that will prepare students for college or the workplace.		●	●	●				
Develop clear expectations for student learning.		●	●	●				
Require participation in community service programs for high school graduation.		●	●					
Institute peer and cross-age tutoring programs.			●	●	●			
Provide on-site health services and strengthen health education.		●					●	
Focus on life skills.		●	●	●				
Increase the number and quality of counselors, including bilingual counselors, available to students in predominantly minority schools.		●	●		●			

CHART OF ROLES AND RESPONSIBILITIES

GOAL 3 Significantly increase the participation of minority students in higher education with a special emphasis on the study of mathematics, science, and engineering. RECOMMENDATIONS FOR HIGHER EDUCATION	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Revise federal student aid formulas to increase the proportion of grants to loans.	●							
Offer a six-week summer science residential program for at least 50 minority high school juniors on each college and university campus.					●			●
Increase support for predominantly minority institutions that produce mathematics and science graduates.	●	●						
Expand the concept of affirmative action to include outreach efforts at the pre-college level.					●			
Intensify minority student recruitment.		●	●		●			
Improve the campus racial climate.					●			
Create minority enrollment incentives.		●			●			
Link salary and promotion decisions to effectiveness in facilitating the graduation of minority students.					●			
Improve minority faculty recruitment and retention.					●			●
Clarify and enforce articulation agreements between comminity colleges and four-year colleges and universities.		●			●			●
Actively support mathematics and science-based career choices by minority students.				●	●			
Encourage more minority students to take advanced placement examinations.				●				
Form institutional consortia.					●	●		
Involve the private sector.					●	●		
Modify institutional accreditation criteria to include an assessment of institutional climate for minority students.		●			●			
Offer optional 13th year programs on college campuses.			●		●			
Fund residential summer science academies through the National Science Foundation and the Department of Energy for students in grade 7–12.	●				●	●		

CHART OF ROLES AND RESPONSIBILITIES

GOAL 4 Strengthen and increase the number of teachers of minority students. RECOMMENDATIONS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Provide incentives for the best teachers to be available to the students who need them the most.	●	●	●		●			
Pay educators to work 12 months, and have them use that time to prepare for and to deliver quality education to students.		●	●	●				
Support and expand the efforts of predominantly minority institutions to prepare teachers, including bilingual teachers.	●				●			●
Develop more creative recruitment and outreach programs for prospective teachers.		●	●		●			●
Support alternative paths into teaching from other professions.		●			●			●
Create a National Merit Teaching Scholarship Program.	●	●						
Develop loan forgiveness programs for high-ability minority students to attract them to teaching.	●	●						
Establish a national Doctoral Opportunities Program.	●							●

CHART OF ROLES AND RESPONSIBILITIES

GOAL 5

Strengthen the school-to-work transition so that minority students who do not choose college leave high school prepared with the skills necessary to participate productively in the world of work and with the foundation required to upgrade their skills and advance their careers.

RECOMMENDATIONS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Replicate promising efforts in this area such as the Boston Compact.			●			●	●	●
Provide summer and academic year internships, apprenticeships, and cooperative worksite training.	●	●	●			●	●	

CHART OF ROLES AND RESPONSIBILITIES

GOAL 6 Provide quality out-of-school experiences and opportunities to supplement schooling of minority youth and adults. RECOMMENDATIONS	Federal	State	School Districts	Teachers and Administrators	Colleges and Universities	Private Sector	Minority Families and Communities	Foundations
Establish a National Youth Service.	●	●						
Double the capacity of the Job Corps.	●							
Expand and improve basic education and training services for youth and adults under the Job Training Partnership Act.	●	●						
Make available financial aid for those in the workforce who want to go to college or other forms of postsecondary training.	●	●						●

APPENDIX B

ETHNIC GROUP LABELS

The subject of ethnic group labels is not a simple issue. Changes in history, geography, and perceptions by both members and nonmembers of the respective groups alter the preferences within and outside the group. One constant is that no single label is uniformly used.

Although we are aware that there is significant diversity across and among the ethnic groups that we refer to in this Plan, we were also concerned with the readability of the report. Consequently, we chose in the main to use a consistent set of labels for the five groups with which we were primarily concerned. This, however, should not be understood as an attempt to ignore the broad diversity within each of the groups in terms of nativity, migration, immigration, skin color, language, residence, or cultural orientation. When citing statistical data, we retain the identifier used by the respective data source.

It should also be noted that we perceive the groups discussed in this report as "ethnic" groups, rather than "racial" groups. This is based on two factors: the absence of clarity or consensus on what constitutes distinctive and unique racial markers; and the important role that social definitions play in defining what constitute "racial" differences and how culture shapes social definitions.

Even though we use the labels below as primary identifiers, this does not imply that we perceive the five groups as completely distinctive. This is clearly not the case. Historical as well as modern interaction and communication between these groups have resulted in partial blending.

The ethnic identifiers used in this report and their explanation are presented below:

"Alaska Native" refers to those residing in Alaska who are Eskimo (Inupiaq and Yupik), American Indian (Athabaskan, Tlingit, Haida, Tsimshian, Eyak and other North American Tribes), or Aleut.

"American Indian" refers to members of one of the 300 to 400 tribes (both federally and non-federally recognized) that exist in the U.S. with ancestors who lived here before the arrival of Europeans. American Indians are also often referred to as Native Americans or Indians, and individuals are frequently identified by tribal affiliation.

"Black American" or **"Black"** refers to individuals of African heritage, most of whom were born in the U.S., making up the largest ethnic group in America. The label, as used by the Bureau of the Census and other data sources, includes U.S.-born and non-U.S.-born Blacks, such as those from the West Indies. Hispanic-Blacks are included under the specific national affiliation (for example, Cuban or Cuban American) or the broader label of Hispanic. Other labels include African Americans and Afro Americans.

"Hispanic" is a generic term that includes such diverse communities as persons of Mexican descent, Puerto Ricans (both in Puerto Rico and on the mainland), Cuban Americans, and persons from Central and South America, the Caribbean, and other locations. When appropriate, we have sought to refer to the specific subgroup in the plan. We have also made an effort to be careful when citing data about "Hispanics" because of the possible distortions created when one generalizes about a group that encompasses such diverse characteristics. Other labels include Latino, Latin American, Spanish Origin, Spanish Surname, or Spanish Speaking.

"Mexican American" is used to refer to individuals of Mexican descent; including those born in and outside the United States but residing in the U.S. Other identifiers: Mexican, Mexicano, Chicano, Latino, Hispano, and Spanish American.

"**Minority**" as used in this report refers primarily to five ethnic groups: Alaska Natives, American Indians, Black Americans, Mexican Americans, and Puerto Ricans. However, some of the descriptions and discussions in the report can also apply, in several instances, to other minority groups such as Cuban Americans, Asian immigrants, Central American immigrants, and others. Occasionally, such as in the description of demographic trends, the term "minority" is used in this report to refer to all non-White Americans.

"**Puerto Rican**" refers to persons born in Puerto Rico as well as those born on the mainland but of Puerto Rican descent.

"**White**" is used to refer to those of European, Near Eastern, and North African heritage. As counted by the Bureau of the Census, this category includes those who identified themselves as "White." Low-income "Whites" share many of the educational barriers discussed in the report, including high dropout rates and limited educational opportunities.

APPENDIX C

LIST OF PARTICIPANTS

Our special thanks are extended to the numerous individuals who unselfishly contributed to the project. At MIT, we benefitted from the assistance of Marilyn Bodnar, Steven Burke, Richard Eckaus, Nitza Hidalgo, Dina Moakley, Ayida Mthembu, Moon Nimon, Tom Peacock, Judy Jackson Pitts, Elizabeth Rigby, Tracy Robinson, Mileta Roe, Renée Smith-Maddox, and Betty Sultan. In addition, we want to thank the MIT undergraduates in our Student Resource Group: Joaquin Abreu, Laura Armstrong, William Bankhead, Beven Bauman, Christina Boyle, Steven Danner, Tom Fahy, Natalia Fuentes, Alberto Herrera, Kirsten Hoyte, Jonathan Katz, Bill Large, Mike Mitchell, and Andy Strehle. Jason Slibeck served as Coordinator of the Group.

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San Juan, PR
December 9-10, 1988**

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Resource Center for Science and Engineering Workshop

Louis R. Christiansen, Headmaster
Saint John's School

Odette Fumero de Colón, Principal
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March 10-11, 1989

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APPENDIX D

LIST OF COMMISSIONED PAPERS

Philip L. Clay, "Minority Faculty: Towards an Action Plan." April, 1989.

Badi G. Foster, "Minority Participation in the Adult Education System." May, 1989.

Laura I. Rendón and Amaury Nora, "Salvaging Minority Transfer Students: Toward New Policies that Facilitate Baccalaureate Attainment." May, 1989.

G.P. Smith, "Increasing the Number of Minority Teachers: Recommendations for a Call to Action." May, 1989.

These papers are available upon request from the QEM Project. Please send a self-addressed, stamped ($2.40) 10" × 12" envelope to the following address for each paper you wish to receive:

Quality Education for Minorities Project
MIT Room 26-157
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PHOTO CREDITS

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